Forms and Content Appendices for:

Connecting Emergent Curriculum and Standards in the Early Childhood Classroom: Strengthening Content and Teaching Practice

by Sydney L. Schwartz
and Sherry M. Copeland

This web-based download contains printable 8½" x 11" versions of Figures 3.1, 3.2, and 9.2, and Appendices A–F, H, and M–P.

The listing of content ideas that young children can begin to develop and extend (Appendices A–F) are culled from the literature generated by national and state professional subject area organizations in mathematics, science, social studies, literacy and reading, and professional scholars in each of these areas. The performance standards and the behavior indicators connected to the content ideas are culled from a variety of state and local early childhood standards publications, and are adapted by the authors to make the content more usable.

FIGURE 3.1. Record of Observations and Interactions

Description of activity in progress: Date:_____ Child(ren)_____ Center and materials_____ Observed actions and conversation: Attach photograph and work samples.
Identification of the content that the child seems to be using in the process of the activity: Subject:_____ Key Idea(s):_____ Subject:_____ Key Idea(s):_____
Teacher entry statement:
PAUSE
Child's response and follow-up conversation:
Strategies used to further the content in the center: Process questions, think-aloud, sharing adult experiences or information, explanations, addition of text and additional resources.
Gracious exit from center activity:

FIGURE 3.2. Focused Curriculum Planning Sheet

Focus/Theme/Topic: _____

Key Concepts:	
Key Vocabulary:	
Curriculum Plans	***Performance Standard and Behavior Indicator***
Group Time	
Launch Activities:	
Follow-up Activities:	
Read-Alouds and Shared Reading:	
Music/Gross Motor Activities:	
Center Time	
Independent Center Activities:	
Adult-Designed Center Activities:	
Culminating Activity	
Celebrating by sharing with family, other classes, and interested adults:	

FIGURE 9.2. Rubric for Retelling

Child's Name: _____ **Date:** _____

Title of Story: _____

Linguistic level: Uses Minimal Text Language _____

Uses Rich Text Language _____

	COMMENTS
1. Opens retelling with a story context/event that sets the story in motion. No Response ☐ With Props ☐ With Prompts ☐ Independently ☐	
2. Includes major/critical events in an order that builds the story line or plot. No Response ☐ With Props ☐ With Prompts ☐ Independently ☐	
3. Clarifies major character roles. No Response ☐ With Props ☐ With Prompts ☐ Independently ☐	
4. Includes minor events. No Response ☐ With Props ☐ With Prompts ☐ Independently ☐	
5. Clarifies minor character roles. No Response ☐ With Props ☐ With Prompts ☐ Independently ☐	
6. Brings story to closure appropriately as related to the events. No Response ☐ With Props ☐ With Prompts ☐ Independently ☐	

APPENDIX A

Physical Science Content

Key Content Ideas	*Performance Standards and Behavior Indicators*
PHYSICAL LAWS OF MOTION	
A force is needed to move an object. Forces include pushing and pulling; gravity; and moving air. Simple machines such as levers, gears, and pulleys reduce the amount of force needed to move objects.	*Recognizes that different forces move objects and asks questions about the forces.* *Understands that simple machines reduce the amount of force needed to move an object.* Purposefully experiments with ways to move objects with such actions as pushing, pulling, rolling, sliding, and dragging, and compares the results. Experiments with simple machines such as wheels and pulleys and talks about how it is easier to move an object.
The speed, distance, and direction of movement of an object are dependent upon the shape and surface of the object, the surface on which it moves, and the intensity of the force.	*Realizes that in addition to the force, differently shaped objects and the surface texture of both the object and the surface affect the speed, distance, and direction of movement of objects.* Purposefully adjusts the force to control speed, distance, and direction of movement and talks about how to control or change the movement. Selects a surface and an object to achieve a result–e.g., moves from the rug to the floor to increase the speed of miniature cars that are being pushed.
MATTER	
Objects have unique properties that distinguish them from one another and define the potential for use.	*Distinguishes objects by their unique properties and identifies their potential for use.* Examines objects using the five senses to discover their properties and purposefully selects objects for use based on identified properties–e.g., when cleaning up a liquid spill, discards the piece of drawing paper initially used and selects a sponge for the purpose.

Physical Science Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
MATTER (*continued*)	
Properties of objects can be changed by such forces as temperature, physical action, and mixing.	*Recognizes the relationship between forces that create the change and the results.* Experiments with and purposefully makes changes in the physical properties of objects, such as size, shape, color, and density–e.g., • adding more flour when the playdough becomes too wet. • squeezing the playdough to change its shape.
Collections of objects can be grouped and classified based on physical properties.	*Understands that objects can be grouped based on identical, similar, or related/class properties.* Spontaneously sorts and resorts collections of objects based on identical, similar, or related physical or functional properties–e.g., • collects paper clips in one pile, irrespective of size. • collects the assorted tools for stamping in preparation for an art project.
Matter occurs in a solid, liquid, or gaseous state. Matter changes state when a force such as heat is applied.	*Identifies the differences between the solid, liquid, and gaseous states.* *Realizes that some matter changes state when a force such as heat is applied.* Purposefully makes changes in state using temperature and talks about what is happening–e.g., • Compares the state of a hardboiled egg to an uncooked egg, and talks about the difference as harder, with all the liquid gone. • Compares the way an ice cube melts to the way snow melts. • Requests to put orange juice in the freezer to make orange popsicles. • Talks about the way water disappears when it is left standing in a glass on the windowsill.

Physical Science Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
PHYSICAL STRUCTURES	
The stability of a structure is influenced by the materials used and the design and balance of the construction.	*Understands that the stability of a structure is influenced by the materials used and the design and balance of the construction.* Experiments and purposefully seeks to control the stability of a structure through choice of material, balance, and design, such as enlarging the base of a structure or repositioning the blocks in different parts of the structure.
WATER	
Water flows down, unless acted upon by such forces as moving air, and such tools as pumps, waterwheels, and hoses.	*Realizes that the direction in which water flows can be controlled.* Experiments with and purposely seeks to control the movement of water using available tools.
Water takes the shape of the container it is in.	*Understands that water has no shape of its own.* Notices that water looks different in differently shaped containers and deliberately changes the shape of water by changing containers.
Water has surface tension (cohesion), as illustrated by the shape of a drop of water on a waxy or oiled surface.	*Realizes that water beads hold their shape and will continue to hold their shape when they are moved along a waxy surface.* Experiments with controlling the shape, size, and movement of water beads along different surfaces and talks about the water bead "having a skin" to hold it together.
Water adheres to other materials. (Adhesion) Materials vary in the amount of water they will absorb.	*Realizes that some materials absorb water and others do not.* *Recognizes that materials vary in the amount of water they will absorb.* Deliberately selects an absorbing material to wipe up liquid spills.

Physical Science Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
WATER (*continued*)	
The buoyancy of an object depends upon its mass, weight, shape, and the density of the liquid in which it is placed.	*Begins to understand that mass, weight, and shape are the factors that determine whether an object floats, sinks, or is suspended in water or other types of liquids.* Experiments with floating and sinking and purposely selects objects that float or sink. Purposely alters one of the properties of an object to cause it to float or sink. Compares buoyancy of objects using different densities of liquid–e.g., oil and tomato juice.
Water mixes with some materials and not others. When water mixes with a material, usually the properties of all materials in the mixture change. Some changes can be reversed.	*Understands that materials vary in how they mix with water.* *Realizes that when water mixes with other materials all items in the mixture change in some way.* Purposefully selects materials for mixing with water and identifies the changes that occur to both the water and the material. Experiments with reversing changes–e.g., wetting and then drying clay.
MAGNETISM	
Magnetism is a force that attracts and repels.	*Understands that objects called magnets attract some objects and not others. Realizes that not all objects that look like metal are attracted by a magnet.* *Recognizes that magnets repel other magnets, but not other materials.* Sorts groups of objects based on whether the magnet picks them up or not. Begins to use the terms *magnetic, metal,* and *metallic-looking* when describing an object. Notices that some metals and metallic-looking objects are not magnetic.
The power of magnets varies and is not directly related to size.	*Realizes that magnets exert different amounts of force when attracting and holding objects.* *Realizes that the size of a magnet does not necessarily determine its power to attract.* Experiments and talks about the strength of different magnets. Demonstrates awareness that the size of a magnet does not determine its strength in attracting objects.

Physical Science Content *(continued)*

Key Content Ideas	***Performance Standards and Behavior Indicators***
MAGNETISM (*continued*)	
Magnetic force passes through such materials as air, water, paper, and some metallic objects, but not others.	*Realizes that magnets attract objects through air and such material barriers as paper and water.* Experiments with magnetic force with a variety of materials and talks about how the magnet attracts through some of them.
Magnets have a negative and positive pole. The closer the poles are together, the stronger the force.	*Realizes that a magnet can repel another magnet as well as attract it, but can't repel other objects.* Experiments with and talks about the repelling and attracting force between magnets.
Magnets have many uses in our daily life.	*Recognizes some of the ways we use magnets in our lives.* Purposefully selects a magnet for displaying work on a metal surface.
SOUND	
Sounds are produced by vibrations that result from different kinds of actions. Sounds travel from their source.	*Understands that sounds are produced by different events and are audible at various distances.* Experiments with producing and changing sounds by such actions as striking, shaking, rubbing objects together, or vocalizing, and talks about the differences. Locates the place of origin of sounds, both familiar and unfamiliar.
Sounds vary in volume, pitch, (high/low), quality, or resonance (squeaky, raspy).	*Distinguishes sounds in terms of volume, pitch, quality, and resonance, and relates them to the object producing the sound.* Labels familiar sounds. Identifies the object that is producing a familiar sound based on volume, pitch, quality, and resonance.
Sound patterns occur in music and language.	*Recognizes that sound patterns can be identified and produced in music and language.* Spontaneously sings, chants, and creates musical rhythms, rhymes, and other oral language patterns.
Sounds bounce off surfaces, as in echoes.	*Recognizes echoes as sounds that repeat from another source.* Experiments with initiating echoes.

Physical Science Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
LIGHT	
Light comes from different sources. Under some conditions, a beam of light is visible and can be traced to its source.	*Recognizes that light comes from different sources.* Experiments with light beams using a flashlight and talks about the beam's direction.
Light can reflect off of some surfaces.	*Recognizes that light reflects off of some surfaces and not others.* Experiments with reflecting light using a mirror and other reflecting materials and describes observations.
Light can change color as it passes through different materials.	*Realizes that when light passes through some materials it changes color.* Discovers and experiments with "rainbow" effects when manipulating a light source.
SHADOWS	
A shadow is the darkness that is cast when light shines on an opaque object that is situated between a light source and a surface.	*Realizes that shadows are made by placing an opaque object between a light source and a surface.* Makes shadows by placing different materials in the space between the light source and a surface and identifies the object casting the shadow by looking at the shadow.
The shape of the shadow is determined by the shape and position of the object casting the shadow and the angle of the light in relation to the surface.	*Recognizes that the shape of a shadow can be changed by changing the object or its position in relationship to the light source and the surface.* Repeatedly changes the position of the object casting the shadow and talks about the changes in the shadow. Predicts changes in a shadow before changing the orientation
The size of a shadow changes when the distance between the light source and the object casting the shadow is changed.	*Realizes that the size of shadows can be changed by moving the object or light source.* Changes the size of the shadow by changing the distance between the object and the light source and explains the cause.

Physical Science Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
MOVING AIR	
Moving air moves objects.	*Understands that moving air moves objects in a variety of ways.* Experiments with blowing objects with and without tools such as straws. Experiments with fanning the air to move objects.
Speed of movement of objects caused by moving air depends upon the speed and angle of air movement, the size and shape of the object, and the surface on which the object is moving.	*Realizes that the variables that affect the speed of movement of an object include intensity and direction of the force, the weight of the object, and the surfaces of both the moving object and the plane on which it is moving.* Changes force and direction when blowing through a straw to move objects. Deliberately seeks to control direction, speed, and distance of movement of an object by controlling the force of moving air–e.g., moving a cotton ball by blowing through a straw. Compares movement of different objects that are being moved by the same air force. Traces the path of movement of environmental objects after a windstorm.

APPENDIX B

Life Sciences Content

Key Content Ideas	*Performance Standards and Behavior Indicators*
PLANTS	
Plants' characteristics vary in structure and form, survival needs, and life cycles. There are similarities and differences in plants in terms of such characteristics as physical appearance, growth pattern, survival needs, and structure.	*Is aware of similarities and differences in characteristics of plants.* Describes and compares how plants look and grow, their structure, and what they need to survive.
The life cycle of plants include: germination, growth and change, reproduction and death. The stages in the life cycles of plants vary in form and duration.	*Recognizes that plants grow from seeds, and change as they grow. Recognizes that growing and changing events in the life cycle of plants are similar and different.* Observes, describes, and records changes as seeds sprout into seedlings and then grow into mature plants. Describes differences in time various seeds need to sprout.
The basic needs for plant survival generally include moisture, food, light, air, and space but vary in amount needed and in the way they obtain these essentials.	*Recognizes that plants have survival needs that include water, light, and temperature control.* Helps take care of plants and explains their needs for survival. Talks about similarities and differences in the survival needs of plants for water and light.

Life Sciences Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
ANIMALS	
Animals are classified into groups based on a variety of criteria. One set of criteria is the environment needed for survival: land, sea, or air.	*Realizes that animals can be grouped into different classes.* Distinguishes one group of animals from another by where they live: land, sea, or air.
The life cycle of animals include the following stages: birth, growth and development, reproduction, and death. Stages vary in duration.	*Recognizes developmental periods in animal life cycles.* Talks about differences in babies and adults in different species of animals. *Recognizes differences in timing and pacing of growth and change in different types of animals.* Compares the growth rates of various animals and people.
The body structures of animals vary and these structures determine the potential and limits of their patterns of living, such as movement and eating.	*Recognizes the relationship between the structure of an animal and the way it moves and eats.* Notices that the mouths of animals are different in size and shape and they pick up their food differently. Talks about how animals move differently and relates movement to body structure.
Animals vary in the kinds of habitats that they need.	*Recognizes the relationship between animal characteristics and their habitats.* Talks about people living in houses, fish living in the water, birds living in nests, and animals living in the ground or in various locations such as ant hills, and the reasons why.

APPENDIX C

Earth and Environmental Science Content

Key Content Ideas	*Performance Standards and Behavior Indicators*
WEATHER (in temperate climates)	
Weather changes seasonally in a predictable pattern that influences human and animal activity.	*Anticipates changes in activities relative to seasonal changes.* Talks about forthcoming activities when the weather changes, such as playing in the snow or going swimming. Identifies how people adapt to the changing seasons. Notices changes in animal behavior, such as birds migrating when there are seasonal changes in temperature.
Seasonal changes affect the environment and plant world.	*Is aware of changes in the environment associated with seasonal changes.* Talks about the leaves falling from the trees and anticipates playing in leaf piles when the summer season ends. Notices that some trees do not lose leaves and asks questions about the differences.
Weather changes that influence human activity occur daily, sometimes with visible indicators.	*Recognizes some indicators of daily changes in weather and its relationship to human activity.* Anticipates rain when noticing dark clouds and talks about staying indoors.
ROCKS AND SOIL	
Soil and rocks make up a large part of the earth's surface. There are different kinds of rocks and soil.	*Recognizes that rocks vary in content, size, weight, and shape.* Sorts and resorts rocks and talks about similarities and differences. Experiments with rocks in water and sand, talks about differences in the way they interact in the two mediums. *Is aware that there are different kinds of soil.* Notices the difference between sand and conventional soil and uses them for different purposes.

APPENDIX D

Mathematics Content

Key Content Ideas	***Performance Standards and Behavior Indicators***
NUMBER AND OPERATIONS	
NCTM STANDARD: *Develops an understanding of numbers, ways to represent numbers, relationships among numbers, and the number system.**	
Number sense begins with (1) recognition of a set as a discrete collection, (2) identification of more, less, or the same quantity by matching one-to-one in correspondence between items in two different sets, (3) familiarity with the order of the names of counting numbers.	*Gains ability in the pre-counting skills: set recognition, matching items between sets in one-to-one correspondence, reciting of number words in order.* Creates and recreates sets of objects–e.g., attribute blocks, all round blocks, or all red blocks. Matches items between sets–e.g., one cylinder block on top of one unit block Recites or chants the number words in order without reference to objects or actions.
The counting numbers serve the purposes of specifying numerical quantity and sharing that information.	*Understands that the counting numbers serve a purpose in working with quantities.* Uses counting numbers in activities and identifies "how many" in sets of objects and actions based on counting. Uses number to make decisions about increasing and decreasing the number of items in a set.
Combining or partitioning (joining and separating) sets creates a new set of a different quantity. There is a consistent relationship between the quantity that is being joined or separated and the result (e.g., the addition of two items consistently increases the quantity by the same numerical interval).	*Understands that quantities can be increased and decreased by joining and separating sets.* *Realizes that there is a predictable relationship in the change in numerical quantity through adding or removing items from sets.* Joins sets and counts the numerical quantity of the newly created set and then separates the set to recreate the two original sets, counting with each action. Retrieves additional items to complete a set–e.g., counts out 4 pegs to complete a pegboard row that has 4 spaces remaining. Uses interval counting when quantifying a set–e.g., counts 2 items at a time, 2,4,6, when counting a set.

Mathematics Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
NUMBER AND OPERATIONS (*continued*)	
Numerical quantity can be represented in written form, as tallies, graphs, or numerals.	*Understands that numerical quantity can be represented in written form.* Uses tallies and written numerals to represent numerical quantities. Matches written numerals to sets of the same numerical quantity.
GEOMETRY	
NCTM STANDARDS: *Develops an understanding of shape geometry that deals with the attributes of two- and three-dimensional figures. Develops an understanding of locational geometry that deals with location/position in terms of spatial relationships.**	
Geometric shapes have unique properties and characteristics that distinguish them from one another.	*Distinguishes two- and three-dimensional geometric shapes by their unique properties and characteristics.* Names, matches, and identifies geometric shapes in the environment. Uses a variety of materials to create and re-create 2-D and 3-D geometric shapes using spatial memory and visualization. Solves puzzles using shapes by turning and flipping the pieces. Describes simple geometric shapes (circle, triangle, rectangle, and square) and indicates their position in relation to self and other objects. Investigates and predicts results of putting together and taking apart two- and three-dimensional shapes.
The location of an object on a surface or in space is determined by its relationship to other points in the same area.	*Recognizes that the location of an object is always defined by its relationship to another object.* Uses location language such as "near," "next to," "on top of," "at the corner" to find and describe position in space. Interprets relative positions in space, such as nearer and farther away. Describes, names, and interprets direction and distance in navigating space and applies ideas about direction and distance.

Mathematics Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
MEASUREMENT	
NCTM STANDARD: *Measurement is a way to describe physical properties of objects, surface areas, and distances in space, and to specify locations.**	
Physical properties of objects can be measured and compared using nonstandard and/or standard units.	*Understands the measurable attributes of objects and ways to measure them.* Talks about the attributes of length, volume, weight, surface area, and temperature, and uses non-standard and standard units to measure these attributes–e.g., "longer-shorter," "2 unit blocks long," "one foot long." Compares and orders objects according to these attributes.
Distances can be measured and compared using non-standard and/or standard units.	*Understands that the measurement of distance is obtained by using non-standard and standard tools.* Purposefully selects and uses non-standard and standard tools to measure distances–e.g., five footsteps to door; three feet from the floor.
ALGEBRA	
NCTM STANDARD: *Recognizes patterns of relationships, uses symbols to represent patterns and mathematical situations, and makes models of quantitative relationships.**	
A set is a collection of objects, events, or ideas that are grouped and regrouped for a reason.	*Independently groups and regroups a set of objects and events based on a common physical property or a classification schema.* Sorts sets of objects–such as vehicles–by physical properties such as color or class. Sorts events by attributes, such as intensity of sound.
Patterning is a way of establishing order within a set and between sets.	*Creates patterns within sets of objects/events using a repeated unit and explains the basis for the pattern.* Patterns objects/events in a set in increasingly complex ways–e.g., • single alternation: "red, blue" or "loud, soft sounds" • double alternation: "red, red, blue, blue" • 2-1 pattern: "red, red, blue" • 1-3-1 pattern: "red, blue, blue, blue, red" Labels the pattern based on the unit that defines the pattern–e.g., a "triangle-circle" or "triangle, triangle, circle" pattern. Makes predictions of what comes next in a sequence based on observed patterns.

Mathematics Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
DATA ANALYSIS AND PROBABILITY	
NCTM STANDARD: *Formulates questions that can be addressed with data and collects, organizes, and displays relevant data to answer them.**	
Information in the form of data can be collected, recorded, analyzed, and displayed.	*Collects information to answer questions of interest and records the information in a way that can be retrieved, analyzed, and shared.* Formulates questions, collects and records answers, and summarizes findings. Shares recorded information with others and interprets the findings–e.g., "More people like chocolate ice cream so we should buy more chocolate than vanilla." Compares data from different sources, such as more people in this class like to use magnets than in the other class.

*All Standards are based on NCTM, 2000.

APPENDIX E

Social Studies Content

Purpose: The primary purpose of the social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society and an interdependent world (National Council for the Social Studies, 2004, p. 40).

Subject areas in Social Studies include Anthropology, Archaeology, Economics,* Geography,* History,* Philosophy, Political Science, Psychology,* Religion, Sociology,* Humanities.

*Subjects outlined in this content summary

Key Content Ideas	***Performance Standards and Behavior Indicators***
SOCIOLOGY AND PSYCHOLOGY	
A major attribute of a democratic society is that policies and rules are made by members of the society in order to balance the rights of individuals with the rights of a group.	*Understands the importance of being a responsible member of a group and the standards necessary for a group to function successfully.* Helps formulate and follow class rules. Talks about *fairness* of rules and the need for rules–e.g., setting limits on size of groups in interest centers.
Members of a group have common and unique needs and have similar and different perspectives.	*Recognizes and respects similarities and differences in perspectives and needs among members of the group in order to meet common needs.* Shares and cooperates with others. Communicates feelings, preferences, views, and ideas. Expresses caring and respect for the feelings and ideas of others.
Members of a group have similar and different talents and abilities needed by the community.	*Realizes that peers and adults vary in their abilities and talents to contribute to the community in which they are a member.* Recognizes and calls upon talents of peers in curriculum and routine events. Volunteers to use own talents to contribute to classroom activities.

Social Studies Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
SOCIOLOGY AND PSYCHOLOGY (*continued*)	
Roles and functions in a business or service community are defined in order to fulfill the intended purpose.	*Identifies needed roles to be fulfilled and who fulfills them within the class and the larger community.* Volunteers to help perform various responsibilities in the classroom. Helps monitor the job assignments in the classroom. Identifies and describes roles in a business or service community.
HISTORY	
Historical events follow a time line based on a progression from past events, to present events and leading to future events. Past events affect current events and current decisions affect future events.	*Demonstrates increasing awareness of the relationship between events in time sequences within each day and between yesterday (days in the past), today, and tomorrow (days in the future).* Identifies daily and weekly event sequences and the results of changes in these sequences, such as results of changes in schedule, emerging needs for new rules.
GEOGRAPHY	
People live in communities that are bounded by geographic areas. Facilities within a community meet the needs of the community–e.g., homes, businesses, educational, religious, and recreational facilities.	*Is aware that communities are bounded by geographic/space factors that influence their lives in both indoor and outdoor community areas.* Makes simple 3-D maps of familiar areas that define an indoor or outdoor space (classroom, home, post office, police/fire station, park).
Communities have pathways that facilitate moving between primary facilities. 2-D and 3-D maps are representations of land use of physical space.	*Understands the difference between different kinds of pathways in a community.* Makes simple 3-D and 2-D maps that distinguish people and vehicle pathways between familiar facilities in the neighborhood–e.g., bridges, train tracks, sidewalks, roadways.

Social Studies Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
ECONOMICS	
People produce goods and services, and provide them in exchange for some form of payment–either money or equally valued goods or services.	*Demonstrates awareness of the need to make equivalent exchanges for objects and services with materials or money.* Talks about the different kinds of skills required to fulfill various roles. Dramatizes the exchange of goods and services for money or other goods and services.
People earn money by fulfilling needed roles in a community using unique skills that are required in the role. Money is a common means of exchange for goods and services.	*Realizes that the different job roles require different skills and meet the needs of a community.* Dramatizes job roles in different kinds of service communities–e.g., putting out a fire.
There is a relationship between supply and demand.	*Realizes that there are not always enough resources to meet the demand.* Understands that it is necessary to take turns with materials when there is not enough for everybody to use at once.

APPENDIX F

Language and Literacy Content

- The function of language is to communicate.
- Communication requires using a common language to receive, transmit, and exchange messages for information and understanding, literacy response and expression, critical analysis, and evaluation and social interaction.
- Communication as it relates to literacy occurs in oral, graphic, symbolic, and print forms.

Key Content Ideas	***Performance Standards and Behavior Indicators***
ORAL COMMUNICATION: Listening and Speaking	
Oral language is a universal form of communication between and among people, in terms of receiving and giving messages. In order to effectively communicate messages through oral language there needs to be common agreement on the meanings of the language.	*Understands that communication involves listening and speaking for different purposes.* Shares ideas, opinions, and perceptions of personal experience; communicates wishes and feelings, requests information. Listens with understanding to conversations, directions, rhymes, stories. Understands and follows simple and multistep directions.
The more precise the language, the more effective the communication is likely to be. Words vary in meaning to different people and under different circumstances.	*Expands vocabulary and uses more complex language to communicate.* Incorporates new words into spoken vocabulary. Is increasingly more precise in descriptions of experiences and for requests.
Spoken messages are influenced by intonation, pacing, and gestures. Words and actions don't always carry the same message.	*Understands that differences in tone, body language, and pacing affect the meaning of messages people receive.* Uses actions to help transmit a message when needed and observes actions of others when receiving a message. Changes pace or speech when speaking with second-language learners.

Language and Literacy Content *(continued)*

Key Content Ideas	*Performance Standards and Behavior Indicators*
ORAL COMMUNICATION: Listening and Speaking (*continued*)	
Phonological awareness is the ability to discriminate and identify sounds in spoken language.	*Recognizes rhyming words and similar beginning sounds in spoken language, chants and song.* Matches rhymes and makes up rhymes. Matches and makes up alliterative sounds connected to oral language.
WRITTEN COMMUNICATION: Reading and Writing	
Written language represents spoken language. People write to transform spoken language to written language and read to transform written language to spoken language.	*Makes connections between oral and written language.* Reads and draws signs in context–e.g., reads traffic signs and job charts. Writes some text–e.g., writes shopping list for class party, labels art products and block constructions; writes simple sentences to describe experiences or tell a story. Reads some text–e.g., activities listed on a daily class schedule, instructions for a cooking activity, a simple repetitive story. Makes connections between written words and the letter sounds involved in reading.
The more standard the form of written communication, the more universally available is the message. There are a standard set of rules that govern written communication.	*Realizes that concepts of print are used in both reading and writing.* When writing, uses concepts of print–e.g., directionality from left to right, spacing between words, and punctuation. Reads environmental print and understands the meanings in terms of action–e.g., "exit," "job chart." Reads familiar stories.
Recorded communications are permanent resources, providing opportunities for revisiting to validate information, and obtain increased meaning.	*Understands that writing is a permanent record that can be revisited.* *Understands the need to use different forms of recording for different purposes, such as drawing, charts, conventional writing.* Demonstrates an increase in understanding of and appreciation for written material by seeking more opportunities to read and write. Revisits books to obtain information.

APPENDIX H

Focused Curriculum Planning Form

Focus/Theme/Topic: _____

Key Concepts
Key Vocabulary

Activity Plans	*Performance Standard and Behavior Indicator*
GROUP TIME	
Launch Activities:	
Follow-up Activities:	
Read-Alouds and Shared Reading:	
Music/Gross Motor Activities:	
CENTER TIME	
Independent Center Activities:	
Adult-Designed Center Activities:	
CULMINATING ACTIVITY	
Celebrating by sharing with family, other classes, and interested adults.	

APPENDIX M

Mathematics
Observation Recording Form

CHILD'S NAME_____

Naturally Occurring Event		*Teacher-Designed Activities*	
NUMBER			
Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
Uses counting numbers in activities and recognizes "how many" in sets of objects based on counting.			
Date	Specify the level of quantification and context	Date	Specify the level of quantification and context
Connects numerals to the quantities they represent, using various physical models and representations.			
Date	Specify the level of quantification and context	Date	Specify the level of quantification and context

Mathematics Observation Recording Form *(continued)*

Naturally Occurring Event		*Teacher-Designed Activities*	
GEOMETRY			
Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.			
Recognizes geometric shapes in the environment by matching and labeling.			
Date	Specify shapes and context	Date	Specify shapes and context
Sorts two- and three-dimensional shapes			
Date	Specify materials used and context	Date	Specify materials used and context
Finds and names locations with simple relationships such as “near to”			
Date	Specify labels used and context	Date	Specify labels used and context
MEASUREMENT			
Understand measurable attributes of objects.			
Recognizes the attributes of length, volume, weight.			
Date	Specify the measures and materials used	Date	Specify the measures and materials used
Compares and orders objects according to measurement attributes.			
Date	Specify the attribute and materials used	Date	Specify the attribute and materials used

Mathematics Observation Recording Form *(continued)*

Naturally Occurring Event		*Teacher-Designed Activities*	
MEASUREMENT (*continued*)			
Uses non-standard units to measure.			
Date	Specify units used and objects measured	Date	Specify units used and objects measured
Uses standard units to measure.			
Date	Specify units used and objects measured	Date	Specify units used and objects measured
ALGEBRA			
Understand patterns. *Sorts, classifies, and orders objects by size, number, and other properties, and translates from one representation to another.*			
Recognizes, describes, and extends patterns such as sequences of sounds and shapes or simple number.			
Date	Specify pattern and context	Date	Specify pattern and context
Analyze change in various contexts.			
Describes quantitative change, such as explaining a change in the height of a plant using some kind of measurement unit.			
Date	Specify the change and context	Date	Specify the change and context

APPENDIX N

Physical Science Observation Recording Form

CHILD'S NAME: _____

	Naturally Occurring Event	*Date*	*Teacher-Designed Activity*	*Date*
Observes and talks about physical properties of objects	Specify: objects and properties		Specify: objects and properties	
NOTES				
Compares and contrasts properties of objects	Specify: objects and properties		Specify: objects and properties	
NOTES				
Notices and talks about and compares changes in properties in interaction events	Specify: materials and changes		Specify: materials and changes	
NOTES				

Physical Science Observation Recording Form *(continued)*

	Naturally Occurring Event	*Date*	*Teacher-Designed Activity*	*Date*
Predicts changes in properties and/or behavior of objects during events: e.g., magnets, buoyancy, absorbency, texture, balance	Specify: materials, prediction, changes		Specify: materials, predictions, changes	
NOTES				
Experiments: test and retest results using different forces to move objects	Specify: materials and experiments		Specify: materials and experiments	
NOTES				
Experiments with properties of water	Specify: properties being tested		Specify: properties being tested	
NOTES				
Experiments with properties of sound	Specify: properties being tested		Specify: properties being tested	
NOTES				
Experiments with properties of light	Specify: properties being tested		Specify: properties being tested	
NOTES				

APPENDIX O

Sample Checklist: Alphabetic Knowledge

CHILD'S NAME: _____

Dates: Oct: _____ Jan-Feb: _____ May: _____

Level	*Naturally Occurring Event: Circle letters*	*Teacher-Designed Task: Circle letters*	*Adult Notes*
Matches identical concrete letters	a b c d e f g h i j k l m n o p q r s t u v w x y z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	a b c d e f g h i j k l m n o p q r s t u v w x y z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	
Matches identical written letters	a b c d e f g h i j k l m n o p q r s t u v w x y z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	a b c d e f g h i j k l m n o p q r s t u v w x y z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	
Matches letter clusters; e.g., names, environmental print	LIST	LIST	
Responds to request to find named letters	a b c d e f g h i j k l m n o p q r s t u v w x y z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	a b c d e f g h i j k l m n o p q r s t u v w x y z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	
Verbally identifies letters by name	a b c d e f g h i j k l m n o p q r s t u v w x y z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	a b c d e f g h i j k l m n o p q r s t u v w x y z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	
Verbally identifies letter clusters	LIST	LIST	

APPENDIX P

Visual Discrimination Observation Recording Form

CHILD'S NAME: _____

Level of Matching and Grouping	*Naturally Occurring Activity*	*Teacher-Designed Activity*
OBJECT TO OBJECT		
	Date:	*Date:*
Identical representational objects in the environment–e.g., dolls, dishes, straws.		
Similar and related representational objects–e.g., collections of fruit, miniature cars		
Identical concrete geometric shape–e.g., same size and color triangles		
Similar and *related* concrete geometric shapes–e.g., different types of triangles		
OBJECT TO PICTURE		
Concrete objects to pictures of the objects–e.g., car to car		
Geometric shapes to pictures of the shapes–e.g., squares to squares		
PICTURE TO PICTURE		
Picture of object to picture of object–e.g., in such activities as lotto and memory games		
Picture of geometric shape to picture of geometric shape–e.g., shape lotto, shape dominoes		
LOCATIONAL TERMS		
Identify positions and locations of objects in the environment–e.g., next to, above, below		
Identify positions and locations of pictured objects in magazines and books–e.g., next to, above, below.		