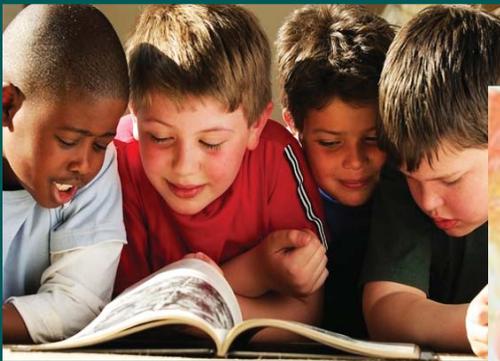


# Nebraska Early Learning Guidelines



**KINDERGARTEN**  
Language and Literacy

The Kindergarten Early Learning Guidelines were created for Nebraska's kindergarten teachers and school administrators to help enrich the work that takes place in classrooms every day. These guidelines incorporate the Nebraska Standards in language arts and mathematics within each domain, and provide examples of how the state standards can be intentionally taught and informally integrated throughout a range of daily experiences to support optimal learning outcomes for young children. They are a practical resource to support the teacher; they also provide examples of authentic activities and assessments which can be incorporated into the existing curriculum to aid the child's academic and social growth. Within the guidelines, examples of what the learning environment should include, what children should be doing in the classroom, and the role of adults within the school and home community are provided so the reader is able to see how adults, materials, and environments can work together to achieve optimal learning and positive lifetime outcomes for young children.

Knowledge about child development and learning and evidence-based practices in kindergarten guided the writing of this document:

- Teaching and learning environments should encompass the holistic developmental needs of the child including academic concepts and skills along with social and emotional development.
- The kindergarten teacher has a complex and complicated role in the kindergarten classroom which includes providing opportunities and experiences that allow children to come together as a community of learners.
- Learning experiences should be integrated and connected throughout the day. Literacy and other academic activities can occur throughout the day across all content areas and should not be segregated into separate time frames and experiences.
- Opportunities to express new information in a variety of ways (e.g., pictorially, through storytelling, emergent writing), are an essential element of the kindergarten classroom, both for the child to show an understanding of concepts, and as a way for the teacher to assess the child's understanding.
- Academic learning and social and emotional development occur through a variety of daily experiences including teacher directed experiences, child initiated experiences, play experiences, and frequent interactions with adults and peers.
- Observation and documentation, as well as other forms of formative and summative assessment, are essential for effective curriculum planning and instruction.
- Daily opportunities for play provide children with practice of newly acquired skills taught in the classroom, along with supporting the child's development of self-regulation, creativity, and problem solving.

***Most of what I really need to know about how to live, what to do, and how to be, I learned in kindergarten. Wisdom did not lie at the top of the graduate school mountain, but there in a kindergarten classroom.***

***~Robert Fulghum***

These guidelines are dedicated to all kindergarten teachers in Nebraska. Thank you for your passion and dedication to education through your work with our youngest students.

# Kindergarten Early Learning Guidelines

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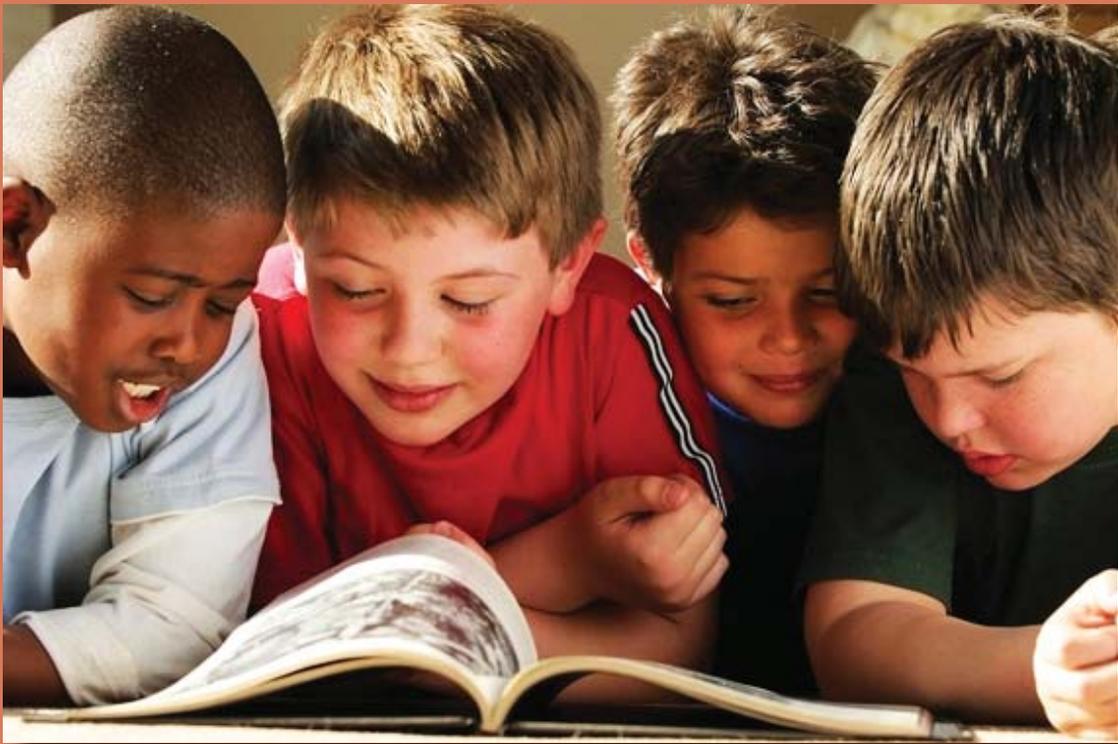
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Kindergarten Standards

# Language Arts





# Language Arts

## Reading Standards

- Knowledge of Print
- Phonological Awareness
- Word Analysis
- Fluency
- Vocabulary
- Comprehension

### **L.A. 0.1 Students will learn and apply reading skills and strategies to comprehend text.**

Language and literacy skills develop through speaking, listening, writing, reading, playing, and communicating.

Children develop the basis for all communication beginning at birth and gradually benefit from modeling and more directed teaching as they enter the kindergarten classroom. Along that continuum between birth and 5 years of age, children begin to understand nonverbal language and cues, along with how oral and written languages are connected. They understand that they can communicate through spoken and written language to express themselves and have their needs met, and that the words they see and hear are also part of the language that they use themselves.

Language and literacy are promoted and supported through experiences with language and print, modeling by adults in the child's life, intentional teaching, peer interaction, play, and also through music, rhythm, and rhyme.

A solid foundation in oral language development in the early years, along with purposeful teaching and modeling of specific skills in the areas of phonological awareness, word analysis, fluency, vocabulary and comprehension, helps to create a strong literacy foundation for children to continue to build upon in later years.



### **Strategies to support inclusive learning environments:**

- ❖ Engage children using their interests (favorite activity, materials, person) to encourage language while also providing a representation of that interest in picture or print form.
- ❖ Use books made from real life photographs of children and their families, books that are pictures only, or use children's communication symbols to provide familiarity and connection to each child's mode of communication.
- ❖ Enhance print/text with visuals or props to help children understand language.
- ❖ Use assistive devices to record communicative intent and predictable phrases that children can access during everyday activities in the classroom, particularly with books.

# Knowledge of Print

## Scenario

As Tia reads "Brown Bear, Brown Bear," she repeats the phrase "What do you see?" as she points to each word. Tia reads the entire book front to back using left to right, top to bottom progression. When she finishes, she looks at Natalie and asks, "Do you want me to read to you?"

## The Learning Environment

The classroom environment should consist of bulletin boards created with environmental print, or created by the children so they are meaningful to them and can be developed throughout the year. There should be a message center or mailboxes for the children to be able to write notes and letters to one another, and labeling of materials in the classroom should be done by the teacher and students together.

*"Children need to understand that print has many functions and is meaningful in their lives. Through books and other print, children can learn that we get information from print. Children need to learn that the basic conventions of print, such as spaces between the words and periods at the end of sentences, are there to help us read the words and gain meaning from the text." (Arlin 1981, Clay 2000)*

Classroom materials:

- Variety of print materials including pictures, posters, labels, signs, multiple copies of books, listening books, clip boards
- Comfortable, inviting book area and listening center with adequate lighting including soft places to sit and enjoy a variety of books
- Real-life materials such as phone books, catalogs, recipe books, greeting cards and magazines distributed throughout the room
- Student mail boxes, message center, stationary, envelopes, writing tools

## Knowledge of Print - Standards

**LA 0.1.1 Students will learn and apply reading skills and strategies to comprehend text.**

LA 0.1.1.a Identify variations in print

LA 0.1.1.b Explain that the purpose of print is to carry information

LA 0.1.1.c Demonstrate voice to print match

LA 0.1.1.d Demonstrate understanding that words are made up of letters

LA 0.1.1.e Identify parts of a book

LA 0.1.1.f Demonstrate knowledge that print reads from left to right and top to bottom

LA 0.1.1.g Identify punctuation

## Literacy throughout the day

Creative Arts:

Have the children create their own name posters by cutting a variety of letters in different fonts out of magazines, newspapers, and catalogs.



Creative Arts:

Use action songs for matching voice to printed word: Who Stole the Cookie from the Cookie Jar? Itsy Bitsy Spider, Johnny Works with One Hammer.



Language Arts:

Take a word walk outside to look for and record environmental print.

# Knowledge of Print

## Learning in Action

### The Child

- Asks people to read stories, signs or notes
- Pretends to read book titles/simple stories
- Reads several words or a few simple phrases
- Points to words using left to right, top to bottom progression when "reading" picture books

### Adults in the School Community

- Write children's explanations or labels on projects, artwork, block constructions
- Look for opportunities throughout the day to model concepts of print (morning message, story time, shared writing, shared reading)
- Encourage children to read familiar print (job charts, word walls, center labels, name lists, familiar books)
- Provide access to high-quality books and materials that promote reading and writing such as alphabet blocks, puzzles, and stencils
- Provide direct instruction of knowledge of print concepts (reading right to left, letter sound correspondences, difference of letter, word, and sentence)
- Provide opportunities for children to develop knowledge about how print works
- Model reading with expression by the teacher
- Provide print materials in multiple learning centers: art, math, science

### Adults in the Home

- Provide multiple opportunities to listen to stories and observe print in their environment (read story books, point out favorite business and traffic signs)
- Point out print while reading books to your children
- Write lists, notes and letters with child by your side, pointing out letters and direction of print
- Provide books and reading materials for children — visit the library and help children obtain their own library cards to give them ownership of the process of selecting and obtaining books from the library
- In the daily routine, point out and read print in the environment, such as a restaurant menu, labels on food containers, posters, and signs in the street

## Approaches to Assessment

- Observe children in a natural setting as they interact with books
- Conduct student/teacher dialogue to assess child's knowledge of cover pages, pictures, familiar words
- Use shared writing experiences for informal assessment of children's knowledge of letters, words, punctuation
- Record child reading

# Phonological Awareness

## Scenario

Lindsey says her name and claps two times, once for each syllable. Edward says his name and claps two times. He excitedly tells the class that he has two syllables in his name, too. Then Todd claps his name and tells the group that his name has only one syllable.

## The Learning Environment

The teacher provides multiple experiences for children to hear oral language and sounds. Opportunities to clap out syllables in words that are familiar to them, such as their name and environmental print, should occur on a daily basis. Nursery rhymes and rhyming games can also be incorporated into transition times throughout the day.

Classroom materials:

- Picture word cards, magnetic letters and boards, rhyming games (bingo, matching games), letter blocks, animals or other objects to sort
- Rhyming books, ABC books, alliterative texts, class-made books, nursery rhymes, poems, and songs that reinforce phonological awareness
- Puppets and other props to encourage children to use oral language and explore sounds
- Cookbooks, dictionaries, instruction books, reference books are incorporated throughout the room

## Phonological Awareness - Standards

**LAO.1.2 Phonological Awareness: Students will demonstrate phonological awareness through oral activities.**

LAO.1.2.a Segment spoken sentences into words

LAO.1.2.b Identify and produce oral rhymes

LAO.1.2.c Blend and segment syllable sounds in spoken words

(cupcake, birthday)

LAO.1.2.d Blend spoken onsets and rhymes to form simple words (v-an, gr-ab)

LAO.1.2.e Segment onsets and rhymes orally (v-an, gr-ab)

LAO.1.2.f Blend phonemes in spoken words (beginning, middle, and ending sounds; recognize same sounds in different words)

LAO.1.2.g Segment phonemes in spoken words (beginning, middle, and end sounds; recognize same sounds in different words)

Literacy  
throughout  
the day

Language Arts:  
Children use musical instruments to tap the syllables in their name or other words.



Science:  
Create a science poem with rhyming words.



Math:  
Sort names by the number of syllables and create a class graph with this information.

# Phonological Awareness

## Learning in Action

### The Child

- Listens to a sentence and then taps rhythm sticks one time for each word heard in that sentence
- Matches rhyming pictures
- Identifies rhyming words in familiar stories and nursery rhymes
- Claps and sorts names by the number of syllables in each name
- Sorts picture cards by beginning sounds or blends
- Plays "I Spy" around the room by blending together onsets and rhymes provided by the teacher
- Repeats segmented words aloud (d-o-g), touching one bingo chip for each sound (phoneme)

### Adults in the School Community

- Recite nursery rhymes and sing songs with rhyming words
- Create and post lists of word families
- Provide numerous opportunities to play rhyming, segmenting, and blending games
- Read books or tell stories that include sounds such as shish, grr, brr, splish
- Incorporate finger plays, nursery rhymes, rhyming games and songs during transition times throughout the day

### Adults in the Home

- Read a variety of books, including picture books, poems, and nursery rhymes
- Play quick games to practice rhyming words in the car or at home
- Clap out the syllables in family names and other words

## Approaches to Assessment

- Observe children matching picture cards as they say the words aloud, and record your observations
- Observe a child clapping three friends' names and record your observation
- Segmenting a short list of words and asks the child to blend the sounds together

# Word Analysis

## Scenario

During journal time, Whitney writes, "Mi mom so a lt ov betfl flrs." As she points to each word, she reads, "My mom saw a lot of beautiful flowers."

## The Learning Environment

The classroom is a print-rich environment where purposeful writing by and for the children is posted throughout. Writing materials in each interest area are available so that the children can draw or write as part of their center activities. The teacher incorporates modeling of writing to help support young children's emergent literacy skills.

*"Teachers should be reading aloud and writing with the children while pointing out punctuation, left to right progression, and matching printed word to spoken word." (Justice & Ezell 2004)*

Classroom materials:

- Variety of books, variety of writing tools including pens pencils, markers, and papers throughout the classroom
- Alphabet puzzles, games, cards, tactile letters such as sand paper letters
- Clip boards, notepads
- Reading and writing materials in every area of the room

## Word Analysis - Standards

**LA 0.1.3 - Word Analysis: Students will acquire phonetic knowledge as they learn to read, write, and spell grade level text.**

LA 0.1.3a Identify upper and lower case letters

LA 0.1.3.b Match consonant and short vowel sounds to appropriate letters (matching letters to sounds while writing)

LA 0.1.3.c Read at least 25 basic high frequency words from a commonly used list

LA 0.1.3.d Use phonetic knowledge to write (approximated spelling).

LA 0.1.3.e Recognize known words in connected text (big book, environmental print, class list, labels)

LA 0.1.3.f Identify similarities and differences in words (word endings, onset and rime) when spoken or written

## Literacy throughout the day

**Creative Arts:**  
Have the children create their own rhyming songs and have the teacher document it.



**Science:**  
Write about science projects and activities such as planting seeds, where they make predictions about the plant, and document the changes they see while the plant is growing.



**Literacy:**  
Have the children take clipboards and pencils/crayons outside to draw and write about what they see.

# Word Analysis

## Learning in Action

### The Child

- Experiences upper and lowercase letters through a variety of means such as puzzles, games, books
- Writes sentences, simple stories, and notes using approximated spelling
- Reads familiar words from around the classroom
- Becomes familiar with high frequency words through repeated readings and word games
- Contributes to family word lists for rhyming words, beginning or ending sounds
- Plays with sounds and letters through songs, games and activities

### Adults in the School Community

- Read a variety of alphabet and rhyming books and songs daily
- Encourage formal and informal daily writing experiences throughout the day that allow for approximated spelling
- Provide a variety of active, hands-on alphabet experiences
- Provide a high frequency word wall or word book for children to use throughout the day
- Read familiar books using the cloze method that allows children to fill in a word (The teacher reads "I see a \_\_\_\_ \_\_\_\_ looking at me" then lets children say missing words)
- Provide multisensory activities and then write down children's reactions (What We Saw at the Park, How to Cook Porridge)

### Adults in the Home

- Read a variety of books including alphabet and rhyming books
- Provide an opportunity to experiment with writing tools
- Model writing of lists, letters and notes
- Encourage the children to talk about experiences

## Approaches to Assessment

- Observe children writing in journals to see what connections are being made between letters and sounds. Use observations to provide additional support for mini lessons
- Observe children reading familiar texts and make note of words that are recognized
- Watch child sort word cards into different categories such as three or four letter words or picture cards into beginning sound or ending sound categories

# Fluency

## Scenario

As Maria explores the drama center, she uncovers a familiar character from Beatrix Potter's *The Tales of Peter Rabbit*. She asks, "Who is this?" The teacher responds, "Why this is Peter Rabbit. You remember the story of Peter Rabbit, don't you?" Maria responds with "Yes." The teacher utilizes the opportunity to re-read the Tale of Peter Rabbit using creative voices to stimulate interest and encourage student responses. Soon the children were seen acting out the story in the drama center and repeating many of the phrases as they referred to the book for the story line.

*"Shared reading boosts children's confidence to read with their peers and join in as they are able. Reading familiar big books with predictable text increases children's fluency, which is one of the skills research has found to be essential to becoming a successful reader." (Jacobs and Crowley, 2010)*

## The Learning Environment

*"An important goal for the kindergarten teacher is to reinforce the knowledge of letter names and to increase the recognition of letters in increasing ease and fluency." (Snow, Burns, and Griffin, 1998)*

The teacher incorporates finger plays and rhyming songs during transition times throughout the day. Opportunities are provided for children to be able to hear sounds or see visual representations of syllables in words that are familiar to them, such as their names and environmental print.

Classroom materials:

- Meaningful print environment including pictures, posters, and child created labels and signs
  - Big books in book center for repeated readings
  - Books with CDs or audio tapes in the listening center
  - Poetry and song notebooks with audio tapes or CDs
  - Tape recorder and video camera to record children during drama, singing and reading books to recognize expression and development of voice
  - Books for partner reading
  - Picture book photos for retelling of stories
- Books and books on tape or CD in areas such as the puppet and housekeeping centers, so children can re-create the stories

## Literacy throughout the day

**Creative Arts:**  
Children create their own scripts and scenarios using a favorite and well read book.



**Physical:**  
Incorporate finger plays and songs with props or felt board pieces for *Five Little Speckled Frogs, Down by the Bay*.



**Science:**  
Incorporate science vocabulary words into the daily classroom routine.

# Fluency

## Learning in Action

### Fluency - Standards

**LA 0.1.4 Students will develop accuracy, phrasing, and expressions during grade level reading experiences.**

LA 0.1.4.a Imitate adult's expression, reflecting meaning with voice (pause, stress, phrasing)

LA 0.1.4.b Imitate repeating language patterns during reading (modeling reading, choral reading)

LA 0.1.4. c Read familiar text with others, maintaining an appropriate pace

### The Child

- Repeats nursery rhymes and fairy tales orally to peers, teachers, and guests
- Listens to nursery rhymes, fairy tales, and pattern books
- "Reads" familiar texts with others using an appropriate pace
- Re-creates a familiar text using the book as a resource

### Adults in the School Community

- Build on children's interests to experiment with language patterns for a variety of purposes (role playing, rhyming, using props, conversing)
- Provide opportunities to experiment with language patterns (nursery rhymes, fairy tales and pattern books)
- Provide opportunities for children to engage in turn taking and dialogue in conversation
- Incorporate real-life experiences to enhance children's experiential play to bolster student's cultural backgrounds
- Allow more time for some students to learn a concept and re-teach until those students are developmentally ready to understand

### Adults in the Home

- Provide multiple opportunities for children to listen to stories
- Point out print while reading books to your children to model phrasing
- Provide books and reading materials for children; visit the library at story time
- Sing songs and nursery rhymes

## Approaches to Assessment

- Observe children in natural settings as they interact with books
- Document student/teacher dialogue (conferencing, anecdotal records)
- Document children's extension of a book through art, building, or puppet show
- Observe children daily to guide instruction
- Administer an oral phonological awareness assessment that gives information on the emergent reader

# Vocabulary

## Scenario

As part of a nature study, the children are exploring rocks in the science center. The teacher comments, "You are examining the rocks." "John your rock is rough because it is bumpy." "Who else has a rough rock?" "What else do you feel on your rock?"

## The Learning Environment

*"As children are developing their reading and writing competence, we need to take advantage of their listening and speaking competencies to enhance their vocabulary." Isabel Beck, Bringing Words to Life*

The classroom environment supports the development of both oral and written vocabulary. The teacher intentionally introduces and incorporates vocabulary both orally and visually throughout the day. Student interaction is encouraged so that opportunities to use new vocabulary words are available. Using the new words in meaningful context allows the children to move the vocabulary terms from their receptive language to their expressive.

Classroom materials:

- Word walls of various types (centers or where easily displayed)
- Create experiences where vocabulary words are used in each center
- Books relating to the concepts being explored

## Vocabulary - Standards

**LA 0.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.**

LA 0.1.5a Examine word structure elements and word patterns to determine meaning

LA 0.1.5b Relate new grade level vocabulary to prior knowledge and use in new situations

LA 0.1.5c Develop awareness of context clues that may be used to infer the meaning of unknown words

LA 0.1.5d Identify and sort pictures of objects into conceptual categories

LA 0.1.5e Determine word meaning using reference materials and classroom resources

## Literacy throughout the day

Physical:

Have the children physically represent a new vocabulary word with their bodies or through actions.



Art:

Have children create a visual representation of a vocabulary word.



Language Arts:

Create word walls that are unique and relevant to each center area in your classroom.

# Vocabulary

## Learning in Action

### The Child

- Sorts objects or pictures of objects into categories based on the properties of the objects: shiny, round, bumpy
- Asks others for clarification when he/she does not understand the meaning of a word
- Refers to reference materials such as pictures on the "Wow" word wall to aid in understanding the meaning of words
- Develops an awareness of endings that show meaning such as -ing, -s, -ed.
- Makes connections between new words learned and words in his/her prior knowledge ("Glad means happy")
- Re-reads, retells and acts out stories using flannel board figures from familiar texts and student-created books

### Adults in the School Community

- Help students develop "word consciousness" and a love of words by drawing their attention to new and unusual words in books
- Select unfamiliar (tier 2) words from classroom literature and themes as well as academic words to teach directly
- Provide opportunities to use and review words that have been learned. For example: writing them in the morning message, selecting other books to read and put at the listening station that have similar vocabulary, playing games with vocabulary words
- Make connections between words students know and new words
- Provide opportunities for children to brainstorm words that relate to a theme, or have the same meaning. Another word for giant (enormous, huge)
- Provide opportunities to draw pictures (or provide a picture) that depict the new words taught
- Use new words in conversation with students

### Adults in the Home

- Have conversations with their children
- Encourage children to ask when they don't know what a word means
- Read a variety of books (poetry, fiction, informational texts) to students and explains words their child may not be familiar with
- Encourage children to talk about the illustrations in books and retell their version of the story by looking back at the pictures

## Approaches to Assessment

- Observe students sorting pictures by category
- Observe and document if and when students use recently taught and more sophisticated vocabulary in their conversations
- Observe and document when students use new and interesting vocabulary in their writing

# Comprehension

## Scenario

Simon sits on the floor with the kindergartners, listening to the teacher read a picture book. Mrs. Brown stops and questions the children about what they are seeing in their heads as she read the previous pages. She asks a few of the children to describe "their pictures" to the class. The children then find a place in the classroom to illustrate what they were seeing in their minds.

## The Learning Environment

The children must know that the expression of ideas, drawings, questions, are always acknowledged and accepted in the classroom. If we want thinkers, we need to provide a safe environment that will nurture and appreciate the communication of thoughts. Voices need to be heard and hearts expressed in an environment that encourages inquiry and decision making from the child. The kindergarten classroom provides opportunities for the children to interact with books as an expression of their thinking. The picture books will become an impetus for group conversations, one-to-one sharing, writing, drawing, and moving. The responses will provide the children with a variety of options to explore a range of comprehension strategies: asking questions, making inferences, synthesizing ideas, visualizing information, and making connections between texts, the world, and their lives. The children will begin to see reading as a thinking process.

Classroom materials:

- A variety of genres including picture books, informational text, and trade books
- Flannel board stories
- Retelling cards or child-illustrated pictures
- Props for telling a story
- Class-created anchor charts for helping to understand a story
- CDs or tapes of stories
- Drawing supplies
- Charts and posters that represent children's thinking
- Objects to explore, sort, put into patterns and experiment with

## Literacy throughout the day

**Creative Arts:**  
Have the children re-create a story through pretend play or retelling with cutouts.



**Science:**  
Have the children create a book which illustrates a classroom science activity: planting a seed; properties of a plant.



**Math:**  
Children create story problems based on a concrete representation of a problem.

# Comprehension

## Comprehension - Standards

**LA 0.1.6 Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.**

LA 0.1.6.a Explain that the author and illustrator create books

LA 0.1.6.b Identify elements of the story including setting, character, and events

LA 0.1.6.c Retell information from narrative text including characters, setting, and events

LA 0.1.6.d Indicate that authors use words in different ways (rhythm, repeating line, simile, alliteration, onomatopoeia, sensory details)

LA 0.1.6.e Retell main ideas from informational text

LA 0.1.6.f Identify text features in informational text (titles, bold print, illustrations)

LA 0.1.6.g Demonstrate a basic knowledge of familiar narrative and informational text genres (fairy tales, nursery rhymes, picture books, how-to-books)

LA 0.1.6.h Make connections between characters or events in narrative and informational text, to own life or other cultures

LA 0.1.6.i Generate and/or answer clarifying questions (who, what, when, where, why, how), supporting answers using prior knowledge and information from the text

LA 0.1.6.j Identify different purposes for reading (information, pleasure)

LA 0.1.6.k Build and activate prior knowledge in order to identify text to self, text to text, and text to world connections before, during, and after reading

LA 0.1.6.l Make predictions about a text using prior knowledge, pictures, and titles.

LA 0.1.6.m Respond to text verbally, in writing, or artistically

## Learning in Action

Wiggins & McTighe (1998) and Wiske (1998) suggest that students comprehend when they are able to:

- Connect new knowledge to their prior knowledge, including prior knowledge about other topics and other ideas
- Interpret what they learn
- Apply their knowledge to new situations
- Explain and predict events and actions

# Comprehension

## The Child

- Plays with books by reading, retelling, acting out, drawing, and writing independently or with peers
- Expresses thinking about books in conversations (connections, inferring, asking questions, synthesizing ideas, visualizing)
- Expresses opinions, feelings or motives about characters along with reflecting what the character is really like
- Composes innovations of very familiar texts
- Writes or draws about something in the reader's own life when prompted by a text
- Joins in on the text with teacher and mimics the teacher's intonation and stress
- Makes connections between text and personal experiences or texts previously read
- Interprets illustrations and can use details to support points made in a group discussion
- Recognizes interesting and new information and adds it to current understandings

## Adults in the School Community

- Provide authentic literature for read aloud experiences allowing the child to further interact with the book
- Establish mutual trust that allows the creation of a climate of thinkers able to express their thoughts
- Model through a think aloud what is happening in her head when she reads a book
- Model and explain strategies, guided practice, independent practice with feedback, independent application in authentic reading situations
- Encourage and initiate discussions about books beyond the details so the children can make connections
- Provide opportunities to interact with read alouds in large group, small group, partners and independently by expressing thinking with conversations, movement, writing, and art
- Reflect the meaning of text with voice and correct pause, stress, phrasing and expression as a model to children
- Provide a large block of time for actual text reading
- Provide direct instruction in comprehension strategies
- Provide opportunities for reading in a social setting
- Provide opportunities for personal response (drawings, journal, book chats) with student and teacher feedback
- Consider the language and culture of all learners. Is the language accessible? Are a variety of text genres available? Are the illustrations accessible? Is the content accessible?
- Communicate to parents what is happening in the classroom and provide practical activities

# Comprehension

## Adults in the Home

- Create an environment and reading routine with no distractions
- Encourage the child to ask questions
- Ask questions about the text being read: character, setting, events and "why" questions
- Read a variety of books to your child
- Read with expression to help the child understand the story; perhaps, take on the role of the characters
- Encourage children to express their opinions about the book

## Approaches to Assessment

- Observe children's conversations about literature
- Document student responses (verbal, written and artistic)
- Videotape read alouds and conversations with students
- When appropriate, use a rubric to document children's thinking process development over time





# Language Arts Writing Standard

- Writing Genre

- Writing Process

**L.A. 0.2 Students will learn and apply writing skills and strategies to communicate.**

Children begin their writing journey at a very young age through drawing. They use drawing as a way to display their thoughts, and as a prompt to give a verbal explanation for their work. With the intentional help of the teacher in writing the words down that the child uses, children are able to connect their thoughts to the written word, and eventually take over the writing process themselves.

The teacher supports emerging writing skills by modeling and providing meaningful writing experiences for children throughout the day. The environment of the classroom needs to be designed to support the social and physical aspects of young children's writing. Children need to see themselves as writers, and by incorporating writing materials within every area of the classroom, children receive the message that they can record their thoughts and ideas during the day.



Interesting and enjoyable activities that take place in the classroom can also give children a reason to write, while further incorporating new vocabulary into their word banks, which will eventually be included in their writing. But most of all, an environment where children feel safe and confident in sharing their thoughts and ideas with one another throughout the writing process is key to children's writing development.

***"Children should spend more time writing. As well as being valuable in its own right, writing promotes ability in reading."***

Becoming a Nation of Readers. The Report of the Commission on Reading. (1986)

## **Strategies to support inclusive learning environments:**

- ❖ Promote alternative access by making available a variety of writing surfaces, and also paper, both lined and unlined.
- ❖ Provide a variety of writing tools: large and small handles, long and short sizes, markers, pencils, and determine which one encourages the child to engage in the writing process. This may or may not be the same tool he holds "correctly".
- ❖ Use the child's method of communication as a way of facilitating alternative "writing" experiences, which could include familiar photographs, line drawings, and symbols, as well as computer generated pictures, computer programs which are accessed through the mouse for drawing, and iPods®.

# Writing Genres

## Scenario

Isabella is seated on the floor by the pocket chart with name cards of all children in attendance that day. Using a white board and dry-erase marker, Isabella happily copies friends' names to make her own class list, and then reads her list of names to Carter.

## The Learning Environment

*"In order to meet children's individual needs as writers, we must recognize what they can do independently and determine the next small step in their writing development." Matt Glover, Engaging Young Writers.*

The classroom has opportunities for children to write throughout the day. Having some type of sign-in procedure when they first arrive, a message board or mailboxes where letters can be exchanged, and time for journaling and sharing their writing are activities that will support young children's writing in the classroom.

Classroom materials:

- Writing materials: various sizes of paper and envelopes, index cards, clip boards, journals, writing portfolios, colored markers, pencils, colored pens, crayons, white boards, dry-erase markers, adhesive labels, notebooks, tablets, folders, alphabet and picture stamps and ink pads, stickers
- Technology: story writing and illustrating opportunities on the computer
- Print: signs, word walls, name cards, environmental print, labels on classroom objects, word cards with pictures, photos and names of school employees and classroom children, alphabet posters, word vocabulary books alphabet books

## Writing Genres - Standards

**LA 0.2.2 Writing Genres:** Student will write for a variety of purposes and audiences in multiple genres.

LA 0.2.2a Write for a specific purpose (lists, alphabet book, story with picture, label objects in classroom)

LA 0.2.2b Write to known audience or specific reader (letter to a familiar person, note to teacher, thank you note)

## Literacy throughout the day

Science:

Have the children take turns being weather reporters to draw and document changes in weather throughout the day.



Language Arts:

Have children take clipboards outside to write and draw their observations of nature.



Social Studies:

Create a book of school workers and label with their names and job descriptions.

# Writing Genres

## Learning in Action

### The Child

- Writes a list of friends' names
- Draws a picture and writes (or dictates) a story about it
- Creates an ABC book with letters and words
- Writes a thank you letter to a guest reader or a birthday card to a classmate
- Brainstorms and discusses story topics with a partner
- Reads a variety of books for ideas and pictures
- Reads what they have written to a class or friend

### Adults in the School Community

- Provide paper, catalogs, and writing tools for a well-stocked writing center
- Allow the children to label drawings and objects throughout the school
- Model how to write a letter or invitation
- Make and post lists of various related words
- Model how to brainstorm ideas for a story
- Model how to write a story with beginning, middle, and end
- Give opportunities for child to read story to others

### Adults in the Home

- Write thank you letters with the child to thank the teacher, friend, or family member
- Make a family grocery list together
- Allow the child to label objects around the home
- Create a scrapbook of a special event and label the articles included in it
- Discuss with children places they have visited or things they do to use for story topics
- Help children write adventures in journals
- Have a writing night where each family member writes a story and reads it to the

## Approaches to Assessment

- Observe children writing lists of friends' names
- Listen to children read stories they have written and document progress
- Listen to how the children are brainstorming ideas
- Check the children's writing when they read the story to you

# Writing Process

## Scenario

Kelly is sitting on the floor with paper, pencil and crayons. She is writing a story about going to the zoo. After finishing her picture she begins to write the text to match the illustrations. "I am walking with my camera at the zoo." Kelly sounds out words and writes a phonetic match for her sentence, jumps up to find the word "camera," and returns to finish the text. She easily writes "at" and looks up and spots "the" on the word wall and tells her friend, "I know how to write zoo, z-o-o." The teacher calls on Kelly to complete a task and Kelly immediately takes a piece of paper and places it by her belongings. The paper reads, "Kelly's stuff. I'll be back," in her phonetic writing.

## The Learning Environment

The writing of young children is connected to their talk. It resembles speech and is written down. Young children write for a variety of purposes: to share an event, tell a story, convey information to others, to aid them in getting something done, or respond to literature. Writing becomes a place for the kindergartner to play with language with a spirit of confidence in safe surroundings where support exists for the development of writing skills. The kindergarten classroom provides opportunities for the children to interact with writing materials to express their thinking and feelings. A climate of "I can write" must exist. The children must know that the expression of ideas and drawings are always acknowledged and accepted in the classroom. If we want writers and thinkers, we need to provide a safe environment that will nurture and appreciate the communication of thoughts.

### Classroom materials:

- Children's literature displayed and made accessible to children
- Materials written and illustrated by children
- Word/picture cards
- Dictionaries and word books
- Variety of paper/blank stapled paper for books
- Large chart paper for teacher to write with the class
- Class-created anchor charts for helping to write
- Drawing supplies
- Charts/posters that represent children's thinking about writing
- Word wall
- Alphabet strips/handwriting strips
- A writing center
- Message center in classroom

## Literacy throughout the day

Language Arts: Children have opportunities for writing throughout the day: labeling work, signing in, and writing messages.



Science: Use writing to document if items sink or float, which direction something grows, or if materials are magnetic or not.



Social Studies: Write letters to pen pals in another class or school.

# Writing Process

## Writing Process - Standards

**LA O.2.1 Writing Process: Students will use writing to communicate.**

LA O.2.1.a Demonstrate that writing communicates thoughts and ideas

LA O.2.1.b Apply prewriting activities to generate ideas (brainstorming, discussions, drawing, literature, personal/classroom experiences)

LA O.2.1.c Generate representations of ideas (pictures, labels, letter strings, words, simple sentences); select and organize ideas relevant to a topic

LA O.2.1.d Revise writing by adding details

LA O.2.1.e Edit writing for format and conventions (correct spelling of frequently used words, basic punctuation such as period, exclamation mark, question mark)

LA O.2.1.f Publish a legible document (handwritten)

LA O.2.1.g Print all uppercase and lowercase letters, attending to the form of the letters

## Learning in Action

### The Child

- Writes daily
- Generates content and topics for writing
- Writes without resistance when given the time, place, and materials
- Uses whatever means are at hand to communicate and make meaning: drawings, letter strings, scribbles, letter approximations, and other graphic representations, as well as gestures, intonations, and role-played voices
- Makes an effort to reread own writing and listen to that of others, showing attentiveness to meaning by, for example, asking for more information and laughing.
- Gathers and share information about a topic
- Maintains a focus/stay on topic
- Writes for functional purposes
- Writes to tell someone what to do
- Names or label objects and places
- Uses the syntax of oral language so it is easy to read aloud
- Approximates some of the phrasing and rhythms of literary language
- Writes some words they like from the books read to them
- Makes choices about which words to use on the basis of whether they accurately convey the child's meaning

# Writing Process

## Learning in Action

### The Child

The kindergartner has a desire to communicate with others and will choose to do so in a resourceful and inventive manner with drawings, words, letter strings, scribbles, graphic representations and letter approximations.

*“Early on, their written efforts will mix pictures, letter strings, and phonetic strings, and they will show little or no evidence of punctuation. Nor will kindergarten work be arranged carefully from left to right or top to bottom, with neat spaces between words or letter strings. This is fine. Kindergarten writers are trying out many new skills. Their work is important and meaningful in leading them toward literacy—even if adults cannot always read their phonetic spelling.*

*Drawing is a major, integral component of kindergarten writing. Kindergartners create detailed, even elaborate, drawings related to their writing topics. Many times, the drawings stand alone, telling stories without words. Other times, the drawings reflect how much students know about their topics, capturing more than they are able to write yet in words. Drawings act as a placeholder that students use to hold ideas in their minds, a rehearsal to try out their thoughts, or a plan to generate new ideas.” (Resnick and Hampton, 2009)*

At all times we evaluate and adjust our instruction according to individual kindergartners' strengths and needs.

- Creates a block creation and constructs a sign that directs others: Do Not Touch
- Names are written on a list for a birthday party
- Feeding directions are written and posted for class pet
- Phone books with numbers, phone messages, menus, etc. are created
- Writes or draws about something in the reader's own life when prompted by a text
- Interprets illustrations and can use details to support points made in a group discussion
- Recognizes interesting and new information and adds it to current understandings
- Writes and illustrates books using words from the word wall
- Maintains a collection of writing in a notebook or folder to return to writing for completion, reflection or viewing progress

# Writing Process

## Adults in the School Community

- Provide authentic literature for read aloud experiences so that the kindergartner is presented with mentor texts that provide models of writing
- Reflect the meaning of text with voice and with correct pause, stress, phrasing and expression
- Establish mutual trust that allows the creation of a climate of thinkers able to express their thoughts
- Model and explain writing practices; independent practice with feedback; independent application in authentic writing situations
- Provide a large block of uninterrupted time for writing
- Provide direct instruction in writing to provide specific skills for individual students
- Provide opportunities for children to respond to text
- Provide opportunities for children to become actively involved in their own learning with support, encouragement and feedback from the teacher
- Communicate to parents what is happening in the classroom and provide practical activities

## Adults in the Home

- Establish a writing routine with no distractions
- Respond to situations in which the child can be writing authentically (cards, grocery lists, stories about trips, menus)
- Provide the child with writing materials
- Read a variety of books aloud so the child is exposed to a variety of author styles
- Allow your child to express their opinions about the words in stories that the author used

## Approaches to Assessment

- Observe children as they write
- Confer with children as they write
- Document student responses (verbal, written and artistic) as they read or explain the writing (writing conference)
- Collect writing samples to document growth and plan instruction based on strengths and needs. Compile these samples into a portfolio
- When appropriate, use a rubric to assess writing samples
- Use a writing sample for children to view as a model of student writing
- Utilize a checklist to document when the children incorporate different skills in their writing



# Language Arts

## Speaking/Listening Standard

- Speaking Skills
- Reciprocal Communication
- Listening

**L.A. 0.3 Students will learn and apply speaking and listening skills and strategies to communicate.**

Speaking, listening, reading, and writing are all parts of young children's literacy acquisition. By intentionally creating a rich classroom vocabulary through introducing and using more formal words in context, you allow those words to become part of the auditory and oral vocabulary of the children. The auditory and oral vocabulary then become the bank of words that children incorporate into their writing.

Because reciprocal communication skills vary by context, they need to be intentionally taught through modeling, teaching, coaching, and encouragement, so children know how to vary the skills from situation to situation. Conversation strategies include not only listening to what the other person is saying and knowing how to respond, but also includes reading their body language in order to get the meaning. When children participate in cooperative problem solving, they must listen to several different ideas, be able to express their thoughts completely, and come together on one solution.



Modeling reciprocal communication skills for the children, and allowing them to engage in conversations throughout the day, helps to strengthen not only their communication skills, but also their social skills. We know that communicating thoughts and feelings appropriately is key in developing language and social relationships between children.

### **Strategies to support inclusive learning environments:**

- ❖ Use the child's preferred and most familiar mode of communication, even if it is not yet spoken language, (recording devices, sign language, computer).
- ❖ Analyze the child's ability to both initiate communication and respond to it to determine the activities in which he can best demonstrate reciprocal interactions.
- ❖ Promote modeling and coaching from peers to facilitate how and when to speak and listen in a group.
- ❖ Exaggerate facial expressions and tone of voice to help call attention to how communication works.
- ❖ Provide physical or verbal cues so that the child knows how to predict his turn.

# Speaking Skills

## Scenario

Joey brought his favorite toy from home for show and share. As the rest of the class was listening, Joey gave a presentation about this toy so the other children could hear him. After he was finished with his presentation, Joey answered questions about his toy.

## The Learning Environment

The classroom environment should include many opportunities for children to be able to converse with the teacher and peers in a variety of different settings throughout the day. Activities such as reading with a buddy, show and share, and writing workshop with peer sharing, also allow the child to exchange meaningful information with others in different contexts.

Classroom materials:

- Games or interactive activities that include two or more players
- Books for reading and sharing with a buddy
- Felt board, or stuffed animals available where children can retell a story and incorporate various voice levels, tone, and pitch
- Opportunities to share with others about their day or an event happening in their life
- Thematic units incorporated into centers where children can interact (grocery store, restaurant, sports, farm, dentist office, post office)
- Microphones, tape recorders, Mp3 players, and other props to encourage speaking
- Open-ended materials that encourage dialogue and can be used in more than one way

## Speaking Skills - Standards

**LA 0.3.1 Speaking Skills: Students will develop and demonstrate speaking skills to communicate key ideas in a variety of situations.**

LA 0.3.1a Communicate ideas orally in daily classroom activities and routine

## Literacy throughout the day

Math:

Have children solve story problems orally in small groups with props or support materials.



Social Studies:

Children answer open ended questions in the context of their play.



Language Arts:

Before dismissal, children describe the events of their day with a partner.

# Speaking Skills

## Learning in Action

### The Child

- Will speak clearly
- Participates in small and large group discussions
- Understands voice levels
- Practices speaking in a group setting
- Uses eye contact (as culturally accepted)
- Uses expression and proper pacing
- Clearly communicates thoughts

### Adults in the School Community

- Provide time for the children to share together, especially in centers
- Participate in book talks
- Offer show and share times for children in small groups
- Incorporate opportunities for students to share their writing
- Provide shared reading, choral reading, or echo reading opportunities available where children can imitate expression, phrasing
- Paraphrase children's words
- Encourage children to talk about things that interest them
- Ask open-ended questions that prompt children to predict, hypothesize, summarize, and explain

### Adults in the Home

- Provide time for family discussions involving the child
- Ask the child open-ended questions everyday about school happenings
- Give the child choices and discuss these choices
- Model appropriate speech when communicating to others and when solving problems

## Approaches to Assessment

- The teacher evaluates the speaking standard through listening when the students are speaking in book talks, centers, class discussions, and talking with their classmates
- The teacher identifies any speech problems for referrals at this time
- The teacher records the child's speech for further evaluation

# Reciprocal Communication

## Scenario

Lucas ran into the classroom and straight to the reading corner to find his favorite book. Oh, no! Jordan has the book he wants and she does not want to give it to him. Lucas runs to find his teacher to tell her that Jordan has the book he wants to read. His teacher says, "Lucas, why don't we go back to the reading corner and you tell Jordan how you feel and see if she will give the book to you after she is finished looking at it?" She walks Lucas back to the corner and helps him talk with Jordan. Jordan agrees to let him have the book when she is finished.

## The Learning Environment

The classroom includes a variety of activity centers and daily opportunities that encourage children to interact verbally with both adults and peers. The adults should be modeling good communication skills (eye contact with the person speaking, appropriate body language when talking and active listening skills when a dialogue is taking place).

### Classroom Materials:

- A variety of activity centers that encourage children to interact and communicate with adults and peers
- Props, books, and manipulatives for telling and retelling events and stories
- Felt boards, books, magazines, drama area, pictures, posters and sign language charts to assist and stimulate conversations
- Open-ended materials that encourage children to explain, describe, and expand on

## Reciprocal Communication - Standards

**LA 0.3.3 Reciprocal Communication: Students will demonstrate reciprocal communication skills.**

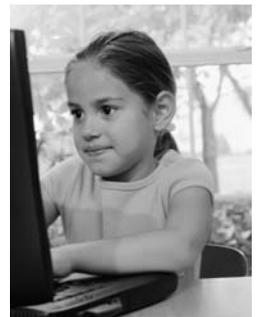
LA 0.3.3.a Demonstrate awareness of and sensitivity to the use of words (helpful and hurtful words)

LA 0.3.3.b Demonstrate conversation strategies (face the speaker, listen while others are talking, take turns talking, eye contact)

LA 0.3.3.c Participate in learning situations (small groups, show and share, cooperative problem solving, play)

## Literacy throughout the day

Social Studies: Identify emotions of characters in a story.



Language Arts: Encourage story dialogue and conversations that identify characters, main idea, and setting.



Language Arts: Model conversations explaining an activity or results of experimentation in the science or manipulative center.

# Reciprocal Communication

## Learning in Action

### The Child

- Asks questions to acquire more information
- Uses "please," "thank you," and "excuse me" in conversational experiences
- Uses language for a variety of purposes (role playing, rhyming, using props, describing feelings, telling jokes, conversing)
- Speaks clearly, or uses alternative methods of communication
- Answers questions appropriate to the situation
- Makes eye contact with the speaker
- Takes turns while speaking with another person

### Adults in the School Community

- Use alternate modes of communication when needed (sign language, gestures)
- Provide opportunities for children to engage in turn taking and dialogue in conversation
- Encourage children's interests and response to classroom materials
- Introduce new vocabulary and ideas
- Ask open-ended questions throughout the day
- Model four questioning roles with the students while engaged in reading text
  - 1.) Ask a study question to identify important information from the text or activity
  - 2.) Summarize passage or activity to identify conceptual knowledge in their own words
  - 3.) Clarify; question. This helps students to notice if there is a breakdown in their understanding and use of context clues for better comprehension
  - 4.) Predict. This step provides a link between what students already know about the topic or concept and the new knowledge acquired through reading or the activity

### Adults in the Home

- Provide multiple opportunities to read to the child and facilitate discussion
- Allow time for the child to respond to what they have heard
- Ask open-ended questions throughout the day requiring more than a one-word answer
- Foster the nurturing relationships and interactions between children and parents that build the foundations for children's later learning
- Encourage child-initiated experiences, play, physical activity, and social interaction
- Limit screen time in order to stimulate imagination and creativity

## Approaches to Assessment

- Observe children in natural setting as they interact with books, classroom manipulatives, and peers
- Initiate student/teacher dialogue
- Use informal conversations as an assessment of communication skills
- Use story comprehension questions as formal assessments of children's knowledge
- Document story retellings by the child

# Listening Skills

## Scenario

In the fall, Mrs. Moore's class studies pumpkins. Today the children are gathered around her and she is asking the class questions concerning what they know about pumpkins. She tells the children to listen very carefully to what each person says and to wait until the person is finished before they share what they know. As the children tell what they know, she writes the facts on chart paper and asks the children to make comparisons. She then asks the children what they would like to know about pumpkins, and writes their ideas on the chart paper.

## The Learning Environment

The classroom environment includes opportunities for children to retell stories and events. The teacher incorporates listening activities throughout the day. Opportunities are provided to encourage authentic conversations between adults and children.

- Variety of reading materials (magazines, books, picture dictionaries, menus, lists)
- Board games, alphabet games
- Flannel/felt boards, props
- Audio books, songs on charts, musical instruments

## Listening Skills - Standards

**LA 0.3.2 Listening Skills: Students will develop and demonstrate active listening skills across a variety of situations.**

LA 0.3.2.a Demonstrate listening skills needed for multiple situations and modalities (stories, songs, conversations, student sharing, teacher presentation)

LA 0.3.2.b Complete a task after listening for information

LA 0.3.3.c Listen and retell main ideas of information

## Literacy throughout the day

Language Arts:  
Games such as Simon Says, Mother May I, Red Light, Green Light



Science:  
Go outdoors and take a listening walk. Compare the sounds outdoors to indoors.



Creative Arts:  
Have the teacher demonstrate making a variety of sounds with various instruments. Have the children close their eyes and try to match the sounds with the instruments.

# Listening Skills

## Learning in Action

### The Child

- Participates in taking turns while talking with other children and teachers
- Listens to stories and retells the main ideas using his/her own words
- Participates in reading familiar, patterned text books such as "Brown Bear, Brown Bear, What Do You See?"
- Follows two or three-step directions such as "Hang up your coat, write your name in the sign in book, and then get a puzzle."
- Listens and follows specific signals for classroom transitions

### Adults in the School Community

- Read a variety of books including patterned, predictable books
- Encourage authentic conversations throughout the day
- Give 2-3 step directions at a time
- Engage children in songs and games that focus on following directions
- Point out similarities and differences during conversations
- Establish a consistent daily schedule
- Promote social skills that stress turn taking and sharing conversational control
- Demonstrate and model active listening skills and behaviors
- Provide listening activities (listening walks, environmental sound walks, sound matching games, Simon Says, echo chants)
- Establish specific auditory signals for classroom transitions (songs, bells, claps)
- Set a purpose for listening activities (compare and contrast, main idea, rhyming words)

### Adults in the Home

- Provide opportunities for the child to practice following two and three step directions (cleaning room, making the bed, setting the table, feeding family pet)
- Provide opportunities for children to follow two- or three-step directions
- Models good listening skills while interacting with the child

## Approaches to Assessment

- Observe children for participation and attention while reading
- Ask questions that promote understanding while reading
- Observe children during art activities for following of directions
- Document conversations with children that exemplify understanding of topic



# Language Arts

## Multiple Literacies Standard

- Multiple Literacies

### **L.A. 0.4 Students will identify, locate, and evaluate information.**

Children have a variety of ways to gain and communicate information in the 21st century! Through the use of computers, projectors, and digital cameras, they are able to find topic information, document learning, engage in interactive learning sites, and communicate with others around the world. It is the role of the teacher to help children identify safe resources and demonstrate appropriate behavior while using the computer.

A digital camera can be used to document the work process of a child over time. Allowing the child to put the pictures in order and write what is taking place in each one lets each child reflect on their own learning process. A Power Point presentation of what the child has learned during the semester can be created by the child and shared with the parents at conferences. This process allows children to feel empowered over their own learning. Children can experience a virtual fieldtrip which is interactive without even leaving their classroom, and yet get the benefits of a new experience and gain new information. Each situation brings about a new learning curve in using the technology along with etiquette in each situation. The role of the teacher is to teach the children how to use the various electronic media, and in appropriate situations. Continuing to connect additional resources to the ones found electronically also helps to expand the information available to that child within the classroom.



There are many benefits to using technology in the classroom, but it needs to be seen as one resource among many that children can use to gain new information and knowledge.

### **Strategies to support inclusive learning environments:**

- ❖ Make sure children have physical access to technology used in the classroom by using enlarged handles, optimum physical placement, switches, and other adaptive devices.
- ❖ Provide opportunities for safe physical exploration of the technology.
- ❖ Promote peer coaching and children working in groups where they have roles so that participation for all is promoted according to their individual abilities.

# Multiple Literacies

## Scenario

Mrs. Timms classroom quiets down on the carpet as they peer inside the penguin exhibit at the zoo. Children take turns going to the microphone on the computer to ask questions. The keeper then answers them on the screen. This virtual fieldtrip gives them a close up view of penguins in their habitat. Once the "field trip" is over, they draw and/or write about what they know about penguins.

## The Learning Environment

The classroom includes opportunities for children to learn and communicate through a variety of technological formats. Students are able to learn through virtual field trips, communicate via email with pen pals in another school, and take digital photographs to document their work.

*At the same time, it is important that even younger students begin to understand that using the Internet requires caution as well as ethical and responsible behavior. (Fountas and Pinnell 2007)*

Classroom materials:

- Computers with teacher-supervised Internet access
- Books that have author Web sites where children can learn more about the creator of the book
- Digital camera
- Computer microphone
- Computer speakers and headphones
- Tape recorder or Mp3 player
- Play phones, computers
- Picture dictionaries or encyclopedias that can be used for reference, both online and in book form

## Multiple Literacies - Standards

**LA 1.4 Students will identify, locate, and evaluate information.**

LA 1.4.1 Multiple Literacies: Students will research, summarize, and communicate information in a variety of media and formats (textual, visual, and digital)

LA 1.4.1.a Identify resources to find information (print, electronic)

LA 1.4.1.b Demonstrate understanding of authorship of print and online resources

LA 1.4.1.c Demonstrate awareness of safe behaviors when communicating and interacting with others (safe information to share online)

LA 1.4.1.d Engage in activities with learners from a variety of cultures through electronic means, Podcasts, video chats, distance learning, e-pals)

## Literacy throughout the day

Physical movement:  
Research why penguins walk the way they do, observe a demonstration through the Internet, and then move like penguins in a penguin parade.



Language Arts:  
Videotape a play re-created by the children after reading "Where the Wild Things Are."



Science:  
Learn facts about the class goldfish through resource books and searching the Internet.

# Multiple Literacies

## Learning in Action

### The Child

- Explores/discovers information through books, computers, and other technology
- Composes inquiry questions and utilizes resources to find further information and answers
- Participates in documentation of classroom activities through video and pictures
- Finds icons on the computer screen to make simple programs work
- Uses mouse or keys effectively
- Uses the computer to play simple games
- Uses email for conversations with e-pals

### Adults in the School Community

- Offer opportunities for learning through technology (virtual field trips, e-pals )
- Provide opportunities for responding to experiences through play, art, music, and writing
- Provide rich experiences to compliment and enrich children's learning of the world around them through speakers, performing groups, virtual and physical field trips
- Embed critical and culturally-sensitive thinking into print and digital literacy activities
- Provide equal access to information and communication technologies for all classrooms and students
- Bring into play a variety of teaching strategies that can encompass the great diversity of children in schools

### Adults in the Home

- Adult support is provided to help the child communicate with distant family members by email or Webcam
- Have the child take pictures of family events or activities and create a scrapbook which can be shared with others

## Approaches to Assessment

- Teacher observations and anecdotal records of students at work through their projects, conversations and play provide documentation of student learning
- Photos and video clips can document the variety of ways students use the options for learning that are available to them
- Portfolios of students' work may include written captions to digital photos, drawn responses to virtual field trips, and printed emails to pen pals

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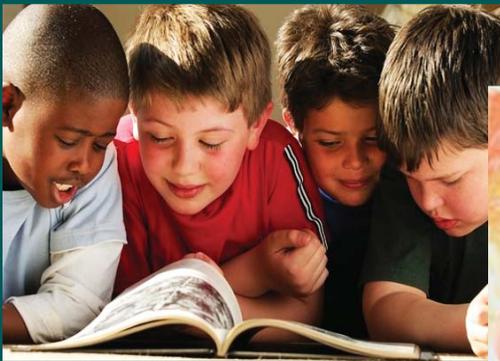
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# Nebraska Early Learning Guidelines



## KINDERGARTEN Mathematics



The Kindergarten Early Learning Guidelines were created for Nebraska's kindergarten teachers and school administrators to help enrich the work that takes place in classrooms every day. These guidelines incorporate the Nebraska Standards in language arts and mathematics within each domain, and provide examples of how the state standards can be intentionally taught and informally integrated throughout a range of daily experiences to support optimal learning outcomes for young children. They are a practical resource to support the teacher; they also provide examples of authentic activities and assessments which can be incorporated into the existing curriculum to aid the child's academic and social growth. Within the guidelines, examples of what the learning environment should include, what children should be doing in the classroom, and the role of adults within the school and home community are provided so the reader is able to see how adults, materials, and environments can work together to achieve optimal learning and positive lifetime outcomes for young children.

Knowledge about child development and learning and evidence-based practices in kindergarten guided the writing of this document:

- Teaching and learning environments should encompass the holistic developmental needs of the child including academic concepts and skills along with social and emotional development.
- The kindergarten teacher has a complex and complicated role in the kindergarten classroom which includes providing opportunities and experiences that allow children to come together as a community of learners.
- Learning experiences should be integrated and connected throughout the day. Literacy and other academic activities can occur throughout the day across all content areas and should not be segregated into separate time frames and experiences.
- Opportunities to express new information in a variety of ways (e.g., pictorially, through storytelling, emergent writing), are an essential element of the kindergarten classroom, both for the child to show an understanding of concepts, and as a way for the teacher to assess the child's understanding.
- Academic learning and social and emotional development occur through a variety of daily experiences including teacher directed experiences, child initiated experiences, play experiences, and frequent interactions with adults and peers.
- Observation and documentation, as well as other forms of formative and summative assessment, are essential for effective curriculum planning and instruction.
- Daily opportunities for play provide children with practice of newly acquired skills taught in the classroom, along with supporting the child's development of self-regulation, creativity, and problem solving.

***Most of what I really need to know about how to live, what to do, and how to be, I learned in kindergarten. Wisdom did not lie at the top of the graduate school mountain, but there in a kindergarten classroom.***

***~Robert Fulghum***

These guidelines are dedicated to all kindergarten teachers in Nebraska. Thank you for your passion and dedication to education through your work with our youngest students.

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## Kindergarten Standards

# Mathematics

Number System  
Measurement  
Display

Operations  
Relationships  
Analysis

Characteristics  
Modeling in Context

Spatial Modeling  
Procedures

Most children come into the kindergarten classroom already having begun to build a foundation in mathematical understanding with real-life experiences. Through manipulating objects, stacking toys, building with blocks, and making comparisons through observations, children have experienced mathematical concepts first hand. Teachers can continue to build on this foundation in the classroom by offering a balance of explicit guided instruction within large and small group settings, and through purposeful play.

Quality kindergarten mathematics is not elementary arithmetic pushed down to younger children. The approach to teaching math should be experiential and playful rather than didactic. Children should be invited to experience mathematics through peer initiated and teacher-led activities that allow them to manipulate and experiment with the materials, and then be able to transfer that knowledge to their play activities as they use the concepts and language of math while interacting with peers. Mathematical experiences can also be integrated throughout the daily schedule to promote mathematical thinking and skills as a practical application.

Long periods of time for play and enriched environments are critical for developing children's mathematical ideas and skills (Sarama and Clements, 2009). Effective teachers use both real and pretend situations to encourage children's mathematical thinking. They try to capture teachable moments using open-ended questioning techniques to expand mathematical concepts. The teacher's role also includes encouraging families to continue to develop and extend mathematical learning outside of school.



Assessment of mathematical skills occurs in many different forms. Effective teachers carefully observe children's actions, listen to children's words, and collect a variety of work samples in order to gain insight into the child's level of mathematical understanding. Through this type of observation and collection of documentation, the teacher can assess the child and plan lessons which build upon that current knowledge, while making connections to new concepts.



# Number Sense Standards

1 Number System

3 Computation (Mastery not expected at this time)

2 Operations

4 Estimation (Mastery not expected at this time)

**MA 0.1 Students will communicate number sense concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.**

Young children develop mathematical concepts through meaningful and active learning experiences throughout their day. These experiences encourage them to engage in the language and properties of mathematics, which helps to create a strong foundation upon which children can build.

Teachers intertwine meaningful ways to incorporate math activities in a variety of contexts and curriculum areas in the kindergarten day. Children graph attendance, measure plant growth, count blocks, and go on a shape hunt to reinforce mathematical concepts. In a classroom where play is part of the curriculum, children have many opportunities to try out new learning with hands-on materials and re-enact real-life situations where mathematics is applied.

Teachers can support the children's learning by encompassing teachable moments in the classroom as well as intentional teaching of mathematical concepts. Teachers also need to plan activities that incorporate the children's natural curiosity and enthusiasm for learning about objects in their environment—both indoors and out.



## Strategies to support inclusive learning environments:

- ❖ Simplify the activity by teaching smaller parts, reducing the number of steps, or using smaller amounts.
- ❖ Provide a variety of manipulatives, including those which provide sensory cues such as texture, bright colors, sounds, etc., to attract the child's interest.
- ❖ Use everyday activities and materials that are available throughout the child's day to provide additional practice opportunities, e.g., how many crackers should Johnny give you.
- ❖ Make sure materials are stable or contained, if necessary, by using a tray, Velcro, or clips.

# Number System

## Scenario

Pedro and Kayla are sitting next to each other during snack time, when Pedro begins counting his crackers, one, two, three, ...twelve. He then counts Kayla's crackers and yells out, "Kayla has more crackers than I do! She has fourteen and I only have twelve!"

## The Learning Environment

*Number sense is defined as "good intuition about numbers and their relationships. It develops gradually as a result of exploring numbers, visualizing them in a variety of contexts, and relating in ways that are not limited by traditional algorithms." (Howden, 1989, 11)*

The classroom environment encourages mathematical understanding through activities that are built into every part of the school day. Manipulatives are accessible to stimulate interest and play upon children's natural curiosity and further their mathematical comprehension of our number system.

Classroom materials:

- Materials for sorting and counting (small blocks, colored bears, colored beads, magnetic shapes)
- Objects that include numbers and number words (clocks, timers, calendars, thermometers, calculators, measuring cups, number lines)
- A variety of writing materials
- Dramatic play props for themed centers (store, bank, and post office)
- Classroom calendar
- Card games, board games, counting books, number lines, manipulatives, play money

## Number System - Standards

**MA 0.1.1 Number System: Students will demonstrate, represent, and show relationships among whole numbers within the base-ten number system.**

MA 0.1.1a Count, read and write numbers 0-20

MA 0.1.1b Count objects using one-to-one correspondence 0-20

MA 0.1.1.c Sequence objects using ordinal numbers (first through fifth)

MA 0.1.1.d Match numerals to the quantities they represent 0-20, using a variety of models and representations

MA 0.1.1.e Demonstrate and identify multiple equivalent representations for numbers 1-10 (e.g., 10 is 1 and 9, 10 is 6 and 4)

MA 0.1.1.f Demonstrate relative position of whole numbers 0-10 (e.g., 5 is between 3 and 10; 7 is greater than 3)

## Math throughout the day

**Creative Arts:**  
Using clay or playdough to create objects that can be sequenced using ordinal numbers.



**Language Arts:**  
Create a class book using photos showing numbers of items in the classroom: 1 chair, 2 books, 3 children.



**Physical:**  
Play Simon Says (stomp three times, hop two times).

# Number System

## Learning in Action

### The Child

- Explores/discovers number sense through manipulatives, games, books, and play
- Participates in meaningful counting opportunities throughout the day
- Recognizes, writes, and matches numerals to the quantity represented
- Compares and orders the position of numbers

### Adults in the School Community

- Offer counting opportunities through graphing, cooking experiences, finger plays, books, songs, games, and cards
- Provide opportunities to think mathematically, and problem solve through story problems and real life situations (attendance, lunch count, days until vacation)
- Provide opportunities to write numerals using air writing, markers, sand trays, Magna Doodle™, clay, Wikki Stix™, crayons, colored pencils

### Adults in the Home

- Have the child set the table using one-to-one correspondence and counting
- Ask your child to help cook (counting and measuring quantity of ingredients: 1 cup, 2 cups)
- Encourage the child to count items in the home: socks, toys, crackers.
- Create a numbered "to do" or "shopping list"

## Approaches to Assessment

- Collect work samples of number writing
- Listen and record how high children count
- Document mathematical knowledge during daily experiences (How many blocks did it take to build that tower? How many children have returned from the restroom? How many students are taking hot lunch today?)

# Operations

## Scenario

Julia is playing with two dolls in the house area. When Sophia joins her with two more dolls, Julia says, "I have two, you have two, now we have four dolls!"

## The Learning Environment

The classroom provides opportunities throughout the day that will help strengthen the child's understanding of math operations. The teacher can support the student by paraphrasing children's activities, as well as naming the operation and providing the vocabulary words for what they are doing.

Classroom materials:

- Manipulatives for sorting, patterning, seriating and counting (small blocks, colored bears, magnetic shapes, linking cubes)
- Objects that include numbers and number words (clocks, timers, calendars, thermometers, calculators, measuring cups, number lines)
- A variety of writing materials
- Dramatic play props for centers such as shoe store, bank, and post office
- Classroom calendar
- Card games, board games, dice, dominoes, counting books, number lines, manipulatives, play money, pretend play

## Operations - Standards

**MA 0.1.2 Operations: Students will demonstrate the meaning of addition and subtraction with whole number.**

MA 0.1.2a Use objects and words to explain the meaning of addition as a joining action (Two girls are sitting at a table. Two more girls join them. How many girls are sitting at the table?)

MA 0.1.2b Use objects and words to explain the meaning of addition as parts of a whole (Three boys and two girls are going to the zoo. How many children are going to the zoo?)

MA 0.1.2c Use objects and words to explain the meaning of subtraction as a separation action. (Five girls are sitting at a table, two girls leave. How many girls are left sitting at the table?)

MA 0.1.2d Use objects and words to explain the meaning of subtraction as finding part of a whole. (Jacob has 5 pencils. Three are blue and the rest are red. How many red pencils does Jacob have?)

## Math throughout the day

**Creative Arts:**  
Plan dramatic play or pretend play scenarios that involve addition and subtraction.



**Language Arts:**  
Make a class book of story problems using addition and subtraction.



**Science:**  
Measure the children's growth throughout the year using non-traditional units of measure.

# Operations

## Learning in Action

### The Child

- Investigates addition and subtraction in everyday activities through the use of manipulatives, visual models, or hands-on exploration
- Participates in meaningful counting opportunities throughout the day, adding boys and girls in attendance, charting the growth of a plant, and adding new growth amount onto the old
- Calculates the days until coming events (how many days until winter break)

### Adults in the School Community

- Offer addition and subtraction opportunities through graphing, cooking experiences, finger plays, books, songs, games, and cards
- Provide opportunities to think mathematically and solve problems in real-life situations (Three children are at a lunch table and one more joins them. How many are at the table all together?)
- Encourage adding and subtracting using recyclable materials such as buttons, plastic milk caps, keys, and old stamps

### Adults in the Home

- Encourage children to count during play. (Let's count the cars I have and the cars you have. How many do we have all together?)
- Include the child in family cooking activities
- Use dice, dominoes or similar items for addition and subtraction. (Roll two dice and add the dots all together)
- Tell addition and subtraction stories using objects from home (snack, silverware, books)

## Approaches to Assessment

- Take a picture of a child during daily experiences showing an understanding of math operations. Dictate what the child said during the activity. (Each carton of milk is \$1.00, so you owe \$2.00)
- Observe and document children using objects to show an understanding of addition and subtraction concepts
- Collect student samples that represent an understanding of operational concepts



# Geometric Concepts and Measurement

- |   |                    |
|---|--------------------|
| 1 Characteristics   | 4 Spatial Modeling |
| 2 Coordinate Geometry<br>(Mastery not expected at this level) | 5 Measurement      |
| 3 Transformations (Mastery not expected at this level)        |                    |

**MA 0.2 Students will communicate geometric concepts and measurement concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.**

Learning about measurement and geometric concepts is no different than learning in any other area of the curriculum. Children learn best through meaningful experiences that are connected to and integrated within their daily life.

Measurement is a concept that can be directly taught within a large group setting, then applied to activities that can be continued throughout the school year. Measuring the children with a non-standard unit of measurement such as crayons or blocks can take place at the beginning, middle, and end of the year as a way to chart and compare their growth over time.

Literature can also be used to link direct instruction of mathematical concepts such as spatial awareness to classroom immersion. For example, after reading the book "Rosie's Walk," have the children re-create an obstacle course that imitates Rosie's journey through the barnyard, around the pond, over the haystack, and under the fence. This can also lead to a story written by the class where they take a journey through the school, and they go "down" the stairs, "around" the corner, "through" the doorway, and "into" the classroom!



## **Strategies to support inclusive learning environments:**

- ❖ Have available a variety of non-standard and adapted units and real life items for measuring such as ribbons, tubing, yard sticks with larger numbers.
- ❖ Use symbols, pictures, or everyday materials/props to allow the child to demonstrate his ability to represent time, days, etc., in whatever manner is understandable to him.
- ❖ Provide opportunities for using objects or the child's own body to demonstrate positional concepts.

# Characteristics

## Scenario

Diego and Hannah are sitting on the floor in the math center with a basket that includes a variety of shapes. Hannah and Diego start to sort and stack the shapes, creating four separate stacks when they have finished. Hannah says "We have one stack of circles, one of squares, one of rectangles and triangles."

## The Learning Environment

The classroom should offer several opportunities throughout the day for sorting and patterning. The teacher should utilize teachable moments within the schedule to reinforce these concepts.

Classroom materials:

- Objects of various sizes, colors, textures, and shapes that can be sorted and arranged in groups or patterns (blocks, dinosaurs, counting bears, leaves)
- Shape posters created by the children of various pictures found of circles, squares, triangles and rectangles
- Real life objects that are in the shapes of squares, rectangles, triangles, or circles (hula hoops, graham cracker, yield sign)

*"Young mathematicians need to be able to use concrete objects to demonstrate their mathematical thinking. Provide a variety of manipulatives for students to use and allow them to work in small groups to solve the problem. Assist them by asking thought-provoking questions as they work. Ask students to verbally share with others how they solved the problem."*  
According to Jacobs and Crowley (2010)

## Characteristics - Standards

**MA 0.2.1 Characteristics: Students will identify two-dimensional geometric shapes.**

MA 0.2.1.a Sort and name two-dimensional shapes (square, circle, rectangle, triangle)

## Math throughout the day

Language Arts:  
Go on a shape hunt and create a book about the shapes that you find.



Science:  
Find naturally-occurring shapes in the environment. Take pictures of them and post them in the science area.



Health & Physical Development:  
Have the children make shapes with their fingers, hands and body. Have them make shapes with a partner.

# Characteristics

## Learning in Action

### The Child

- Sorts objects in the classroom by shape (geometric and non geometric shapes)
- Draws shapes using templates
- Names and identifies shapes around the school and in nature
- Creates and extends patterns using geometric shapes

### Adults in the School Community

- Encourage children to sort, group, and classify materials and also explain the reason for doing this
- Include opportunities for the child to see shapes throughout the school and in nature
- Provide opportunities for children to create their own shapes (chalk, styrofoam and toothpicks, shaving cream)
- Read books that help students learn about shapes
- Use computer programs to let children draw and label shapes on the computer
- Describe attributes of shapes
- Incorporate language of geometry while teaching and interacting with children
- Provide opportunities to feel shapes hidden in a bag, with encouragement to describe and guess the shape

### Adults in the Home

- Sort objects at home (books, toys, cookware/bakeware, etc.) by geometric shapes
- Call attention to the shapes of cereal, crackers, snack items when the child is eating them
- Go on a shape hunt at home and have the children document their findings to share with their peers at school

## Approaches to Assessment

- Observe a child sorting objects in a center and ask the child to explain what she did. Then record your observation
- Provide a tray of objects that are of different shapes and ask the child to name the shapes
- Have the children create pictures with the four shapes: triangles, circles, squares, and rectangles. When sharing about the picture, have them identify the shapes they used
- Play a memory game using various shapes

# Spatial Modeling

## Scenario

Children are at recess. Carlos is climbing across the monkey bars and yells, "Logan, don't go under me 'cause I might fall on you!"

## The Learning Environment

The teacher intentionally incorporates positional words and models them for the children through literature, songs, finger plays, and learning center activities.

Classroom materials:

- Tables, chairs, shelves, counters that can be used as reference to position
- Rhythm sticks or similar instruments which can be used with positional terms
- Literature and nursery rhymes that include positional words, and support materials that allow for retelling
- Manipulatives such as beads that can be strung "through," and blocks that can be built "up"

*"Teachers recognize children's desire to make sense of their world through mathematics. They build on children's intuitive, informal notions and encounters relating to math, making a point to supply math language and procedures. In other words, teachers "mathematize" children's everyday encounters."*

Copple and Bredekamp (2009)

## Spatial Modeling - Standards

**MA 0.2.4 Spatial Modeling: Students will communicate relative positions in space.**

MA 0.2.4.a Demonstrate positional words. (e.g., above/below, near/far, over/under, in/out, down/up, around/through)

## Math throughout the day

**Language Arts:**  
Create a class book with pictures showing the children demonstrating over, under, behind, in front of.



**Health & Physical Development:**  
Have the children create their own obstacle course which incorporates the various spatial elements.



**Creative Arts:**  
Have the children re-create nursery rhymes on a felt board that include positional words as found in Jack be Nimble, Hickory Dickory Dock, Jack and Jill.

# Spatial Modeling

## Learning in Action

### The Child

- Explores the language of positional words (above/below, near/far, over/under, in/out, down/up, around/through) as they interact with materials (such as; blocks, beads, tools), each other, and the environment
- Demonstrates the position or direction if directed by the teacher

### Adults in the School Community

- Model language of positional terms when children are lining up, picking up materials, building, playing on equipment outside
- Point out positions in an illustration or concepts about print
- Incorporate positional terms in activities when participating in physical education
- Use positional terms when conferring with children about artwork and style

### Adults in the Home

- Use positional terms in day to day activities
- Use positional terms as the child helps with chores: Dad might ask for the tool that is **under** the bench; parent might tell child to put the plates **on** the table

## Approaches to Assessment

- Observe children following verbal directions using positional words
- Take anecdotal notes while children work and play to see if they use positional words
- Create an obstacle course for the children and have them tell you what they are doing as they move through it—going under the table, around the chair, over the basket

# Measurement

## Scenario

When connecting a train track, Derek said, "My train is longer than yours." When asked how he knew, he said, mine is 7 blocks long and his is only 5."

## The Learning Environment

Materials are readily available to measure anything during a center time activity or teachable moment. Teachers model non-standard ways of measuring as a part of inquiry within the curriculum. Various theme-based play centers (restaurant/grocery store/retailer, beauty shop) allow children to learn and apply the concepts of measuring length, time, and money.

Classroom materials:

- Yardsticks, rulers, tape measures, measuring cups and spoons, scales, unit blocks, clocks, timers, calendars, sand timers, work bench with measuring tools, portable measuring buckets
- Non-standard materials (ribbon, tongue depressors, string, geometric shapes)
- Play and real money
- Unifix cubes and bear counters

## Measurement - Standards

**MA 0.2.5 Measurement: Students will measure using nonstandard units and time.**

MA 0.2.5a Identify the name and amount of a penny, nickel, dime and quarter

MA 0.2.5.b Identify time to the hour

MA 0.2.5.c Measure using nonstandard units

MA 0.2.5.d Compare objects according to length

## Math throughout the day

Language Arts:  
The teacher writes the children's hypothesis and observations how much water will be left in a jar after the snow melts.



Math:  
Design activities where children are asked to recognize, describe, and extend patterns of coins.



Math:  
Have the children measure themselves using a nonstandard unit of measure such as books, blocks, markers.

# Measurement

## Learning in Action

### The Child

- Works at sand table with containers of varying sizes and shapes
- Uses words relating to time in play (deciding what time the store is open and closed)
- Uses standard and nonstandard items (lengths of string to measure body parts, unit blocks to measure how far children can jump, rulers to measure plant growth)

### Adults in the School Community

- Use and write words related to time throughout the daily schedule. "We go to gym in 15 minutes when it is 10:00."
- Show children how to use objects to measure things, "Look, this table is 5 pencils long."
- Create price tags for items in the pretend grocery store, with the price on one side of the tag and pictures of varying coins on the back side reflecting the price amount
- Involve children in school fundraisers and encourage them to count or graph money

### Adults in the Home

- Have children take home a piece of chalk and a request that the parent trace the child's shadow at 9:00 am, 1:00 pm and 5:00pm and then measure and discuss the change
- Have child sort and count pocket change
- Read books to children about measurement and time such as "Inch by Inch," Leo Lionni, "Too Many Tomales," Gary Soto

## Approaches to Assessment

- Children document their measurements of a variety of materials and graph their findings
- Adults prompt, "How many ways can you think of to make 20 cents?"
- Children play, "What time is it Mr. Fox?" A child says "It is 8:00." Before they take eight steps, each child shows what 8:00 looks like on their own analog clock
- Develop a checklist which names coin value for penny, nickel, dime, and quarter



# Algebraic Standard

- 1 Relationships
- 2 Modeling in Context
- 3 Procedures

**MA 0.3 Students will communicate algebraic concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.**

Children in the kindergarten classroom have multiple opportunities throughout their day to experience numbers informally, through teachable moments, and also through direct instruction. The environment should be set up so that children can practice the skills and language that they learn through the direct instruction in their play and center time opportunities.

The role of the teacher is to bridge the gap of the experiences that the children bring to the classroom, and the more formal operations of academic math. Because the math concepts develop over time with young children, they need to experience numbers and problem solving in many different ways, and should begin to see that many situations can be turned into a math equation.

By using common everyday materials to demonstrate math concepts, such as pizza boxes to demonstrate size (small, medium, and large) or having the children sort a variety of nuts and bolts according to an attribute, helps create a connection of the learning from the home to school environment.



## **Strategies to support inclusive learning environments:**

- ❖ Provide a variety of materials for sorting, matching, patterning, seriating and grouping, including things from the children's everyday environments, with texture and bright colors, contained in trays.
- ❖ Encourage children working in groups or with partners to promote problem-solving.

# Relationships

## Scenario

Diego and Hannah are sitting on the floor in the math center with a basket of counting bears. Hannah grabs some yellow bears and puts them in a pile. Diego says his favorite color is blue and starts collecting the blue bears. Hannah notices there are green and red bears left and sorts them into two separate piles.

## The Learning Environment

The classroom should offer several opportunities throughout the day for sorting and classifying (weather calendar; time). The teacher should utilize teachable moments within the schedule to reinforce these concepts: grouping materials when putting them away, sorting crayons by color, classifying books.

Classroom materials:

- Objects of various sizes, colors, textures, and shapes that can be sorted and classified (blocks, dinosaurs, counting bears, leaves)
- Materials for sorting, grouping, and classifying
- Post examples of patterns children have created or classifying with a variety of materials

## Algebra - Standards

**MA 0.3.1 Relationships: Students will sort, classify, and order objects by relationships.**

MA 0.3.1.a Sort by color, shape, or size

MA 0.3.1.b Create own rule for sorting other than color shape, and size

## Math throughout the day

**Language Arts:**  
Have children create their own class book on classifying and sorting.



**Science:**  
Sort objects in nature by a common attribute: sink/float, size of leaves, length of stems.



**Creative Arts:**  
Sort and classify musical tones by sound.

# Relationships

## Learning in Action

### The Child

- Sorts beads, attribute blocks, or counting bears into egg cartons, with each compartment holding a different color, shape, or size
- Sorts materials found in centers (food from the house center, animals, cars, or blocks) into different baskets using various attributes
- Sorts shoes into different groups (example: laces or no laces)
- Finds and sorts leaves, shells, or other nature objects into groups
- Provides explanations for groupings

### Adults in the School Community

- Provide a variety of objects for students to sort, classify, pattern, count and order
- Invite children to help sort books into the appropriate book baskets (animal books, Clifford books, I Spy books)
- Ask children to line up according to color groups (Example: If you're wearing red, line up)
- Encourage children to describe their groupings and identify attributes that enable items to be sorted into specific categories

### Adults in the Home

- Sort objects at home (laundry, toys, silverware)
- Classify attributes using cereal, crackers, fruit snacks
- Look for similarities and differences in nature among flowers, animals, rock formations

## Approaches to Assessment

- Observe a child sorting objects in a center and ask the child to explain what he did. Record your observation
- Provide a tray of objects and have child classify and state their rule for classification
- Document the interaction of a child with graduated sizes of materials when asked to put them in order

# Modeling in Context

## Scenario

Andrew recognizes a 4 on a card, he says, "I can make a 4 with train cars" and he counts out 4 cars. Then he says to Alex, "If I can have your 3 train cars, I will have 7 train cars all together."

## The Learning Environment

The teacher provides a variety of materials that the children can interact with in all areas of the classroom. The teacher can model adding and subtracting with these materials (setting a place setting in the house area).

Classroom materials:

- Shoe boxes containing a variety of items (pencils, rocks, erasers, milk caps, rubber bands)
- A variety of collected materials such as rocks, shells, leaves, and insects, along with small containers for sorting, and laminated mats with number sequences on them that can be filled in by the student
- Felt pieces or figures that can be used to reenact fingerplays, songs, or books such as *The Doorbell Rang*
- Abacus, calculator, number sentence games and puzzles

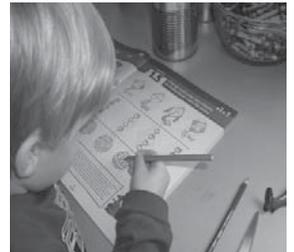
## Modeling in Context - Standards

**MA 0.3.2 Modeling in Context:** Students will use objects as models to represent mathematical situations.

MA 0.3.2a Model situations that involve the addition and subtraction of whole numbers 0-10 using objects

## Math throughout the day

**Language Arts:**  
Create finger plays with finger puppets using addition and subtraction.



**Science:**  
Measure and track the growth of a plant or animal. Make a number sentence to show how many inches the plant or animal has grown.



**Social Studies:**  
Count and create a number sentence to show how many children have green eyes, blue eyes... how many total.

# Modeling in Context

## Learning in Action

### The Child

- Uses props while doing fingerplays; for example, using tongue depressors with frog cutouts for "Five Little Speckled Frogs"
- Uses numbered cards and manipulatives to represent the numbers while creating number sentences
- Plays "War." Tommy turns over two cards and counts the amounts of them, while his partner does the same. The higher amount would win that round
- Play games using dice or dominoes
- Engages in mathematical "play" using real life context activities like shopping and cooking

### Adults in the School Community

- Create and use a number line to show number of days in school
- Provide daily opportunities to create number sentences with attendance, lunch count, milk count
- Model math story problems with addition and subtraction
- Incorporate math vocabulary through modeling mathematical situations in the context of childrens interest and topics of study

### Adults in the Home

- Use real world word problems; for example: There are 3 plates on the table and 4 plates on the counter. How many plates all together
- Count fruit snacks while eating to show how many orange ones, red ones, yellow ones there are
- Read books that include addition and subtraction (The Cheerios Book, The M&M's Book)

## Approaches to Assessment

- A child is given a set of 10 frogs and is asked to divide the set into two smaller sets and then describe the addition equation
- Have the child perform "Five Little Ducks," to see if the child uses the correct correspondence between the props and number in the song or rhyme

# Procedures

## Scenario

Frankie and Dante were at the block center making a zoo. Tyrone and Bobby came over and asked, "Can we play?" Frankie said, "If you came in, there would be four and we can only have three." The teacher overheard them and said, "You just made a number sentence. Two boys in the center and two more would make four boys in the center."

## The Learning Environment

The environment includes opportunities throughout the day to call attention to naturally occurring opportunities for addition or subtraction problems, and having the teacher use those as teachable moments. Intentional teaching in using addition and subtraction with objects should also take place on a daily basis. Problem-solving situations may include number of chairs needed to seat a group of children at snack time, children lining up at recess, or the number of children in an area.

Classroom materials:

- Objects such as beads, pegs, and small blocks
- Games such as Chutes and Ladders or Candy Land where counting occurs
- Materials for graphing by color, shape, size
- Manipulatives that correspond to a story or rhyme, e.g., felt cookies to go with "The Doorbell Rang"

## Procedures - Standards

**MA 0.3.3 Procedures: Students will use concrete and verbal representations to solve number stories.**

MA 0.3.3.a Use objects to solve addition and subtraction of whole numbers 0 - 10

## Math throughout the day

**Language Arts:**  
Create a classroom book depicting a story problem.



**Creative Arts:**  
Have a variety of cut-outs available for children to create their own story problem. Share with the class.



**Health and Physical:**  
Have the children pretend to be the characters in a fingerplay or story and recreate it.

# Procedures

## Learning in Action

### The Child

- Acts out stories in the dramatic play area, like, "The Doorbell Rang," "Little Red Hen" or "The Three Little Pigs."
- Creates number sentences using classroom objects
- Uses counting songs or finger plays to re-create stories with flannel or magnetic boards

### Adults in the School Community

- Read several stories that lend themselves to creating story problems.
- Supply materials for children to explore and create their own story problems
- Do "think alouds" to show how they see situations as learning opportunities for addition and subtraction
- Provide opportunities for children to problem solve real life situations; (Children are asked to search the room for a story problem, e.g., in the science center three chicks hatched yesterday. Today there two more. How many do we have?)
- Utilize teachable moments to bring attention to naturally occurring addition and subtraction problems. If we add two more children at this table, we will have  $2 + 6 = 8$  children altogether

### Adults in the Home

- Ask your child to make up a story with items from home, the grocery store or the park
- Make picking up toys a fun learning activity by having them create a math problem
- Ask your child to make a story out of cereal or snack items
- Use what the child is doing in her routine to highlight addition/subtraction opportunities (setting the table, picking out clothes, brushing their teeth)

## Approaches to Assessment

- Give children a story problem and have them create it with objects. (Mary has two dogs, her friend has five. How many in all? I have eight lollipops and I ate one. How many are left?)
- Observe children interacting with materials and document any addition or subtraction examples they exhibit



# Data Analysis and Probability

- 1 Display and Analysis
- 2 Predictions and Inferences  
(Mastery not expected at this level)
- 3 Probability (Mastery not expected at this level)

**MA 0.4 Students will communicate data analysis/probability concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.**

Teachers reinforce children's understanding of data analysis and probability through informal experiences on a daily or weekly basis. Such activities include rearranging or replacing materials in the classroom, and asking such questions as "Where would these blocks best fit on the shelf?" "Which ones are they most like?"

Kindergarten children need time and opportunity to practice the skills they are learning in many different contexts, both in the classroom and at home. Children can collect data from peers by asking: "What type of pets do you have?" "How many buttons are on their clothing?"

The information gathered can then be incorporated into a graph and analyzed. The results can be shared with their peers, and the teacher can expand on their thinking by posing open-ended questions. What would happen if? Why do you think it is like this?



The basic language of probability can also be introduced through various activities such as estimating the chances of having your name pulled out of a hat for a drawing. The terms *little*, *some*, and *great* can be associated with probability chances in activities.

## Strategies to support inclusive learning environments:

- ❖ Provide hands-on experiences with three-dimensional materials for figuring out and explaining how things fit together.
- ❖ Use containers, trays, slots, to provide ways to organize materials and create graphing displays to help the child discover the differences between collections.
- ❖ Work in stages and with fewer materials to allow the child to come back to his work as often as he needs to.

# Display and Analysis

## Scenario

Amber and Tony are in the science center, sorting animals into groups. Tony notices that there are five animals with two legs in his group. "But I have more." Says Amber as she counts ten animals with two legs in her group.

## The Learning Environment

The classroom is a place where there are a variety of materials available to the students for sorting and graphing, with time given for analyzing and expressing their thoughts. The teacher can go to each area of the classroom and do a think-aloud while showing how anything can be sorted by various attributes: color of paper in writing, blocks in manipulatives, fruits and vegetables in the house area.

Classroom materials:

- Objects of various sizes, colors, textures, and shapes that can be sorted and arranged in graphs (blocks, dinosaurs, counting bears, leaves)
- Graph paper, laminated graphs, and large graphs to be used on the floor. (Hint: Use a shower curtain to create a large graph for students to graph objects)

*"Data analysis contains one big idea: asking and answering questions. To do this, children classify, organize, represent, and use information. The development continuum for data analysis includes growth in classifying and counting and in data representations." Sarama and Clements (2006)*

## Display and Analysis - Standards

**MA 0.4.1 Display and Analysis: Students will sort, classify, represent, describe, and compare sets of objects.**

MA 0.4.1.a Sort and classify objects according to an attribute (e.g., size, color, shape)

MA 0.4.1.b Identify the attributes of sorted data

MA 0.4.1.c Compare the attributes of the data (most, least, same)

## Math throughout the day

Language Arts:  
Create a class poster showing children or objects grouped by various characteristics and incorporating the vocabulary: more, fewer, less.



Science:  
Sort and graph objects in nature after a nature walk by size of plants, length of grass, color of flowers.



Social Science:  
Graph family data of the children, number of siblings, pets.

# Display and Analysis

## Learning in Action

### The Child

- Sorts beads, attribute blocks, or counting bears into egg cartons, with each compartment holding a different color, shape, or size
- Finds and sorts leaves, shells, or other nature objects into groups
- Sorts buttons according to the number of button holes, and counts to find out how many buttons are in each group
- Sorts counting bears and graphs these bears on a laminated graph, then makes comparisons from the graph.
- Practices recognizing, naming, building, drawing, and comparing two- and three-dimensional objects

### Adults in the School Community

- Provide opportunities for students to sort, classify, and graph school-wide information (graph total number of students in each grade, fundraisers, boys-girls)
- Create class graphs and teach children vocabulary for making comparisons on graphs: most, least, same
- Play games with the children, such as "How are they alike?" to teach this concept. Have three or four children with the same characteristic stand in front of the class; all have zippered shirts, all wear glasses, all have belts shoes, etc., and ask the rest of the class to observe what they have in common

### Adults in the Home

- Children sort coins from their piggy bank, or other objects at home. Compares the number of objects in each group (more, fewer, less)
- Have the child create a graph of their family (children, adults, pets, boys, girls) and bring it to school to compare and contrast to other children's families

## Approaches To Assessment

- Observe a child sorting and graphing objects in a center and ask the child to explain how they are sorting the materials. Record your observation
- Collect graphs or take pictures of graphs created by children

# Resources

Copley, Juanita. (2010). *The young child and mathematics*, 2nd ed. Washington, DC: National Association for the Education of Young Children.

Copley, Juanita. (1999). *Mathematics in the early years*. Reston, VA: National Association for the Education of Young Children and National Council of Teachers of Mathematics.

Copley, Juanita. (2004). *Showcasing mathematics for the young child*. Reston, VA: National Council of Teachers of Mathematics.

Copple, Carol, & Bredekamp, Sue. (2009). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8*. Washington, DC: National Association for the Education of Young Children.

Crowley, Kathy, & Jacobs, Gera. (2010). *Reaching standards and beyond in kindergarten*. Washington, DC: National Association for the Education of Young Children.

Fisher, Bobbi. (1998). *Joyful learning in kindergarten*. Portsmouth, NH: Heinemann.

Koralek, Derry. (2003). *Spotlight on young children and math*. Washington, DC: National Association for the Education of Young Children.

Sarama, Julie, & Clements, Douglas. (2006). *K today: mathematics in kindergarten*. Washington, DC: National Association for the Education of Young Children.

The Kindergarten Program. (2006). [1-61]. Retrieved from <http://www.edu.gov.on.ca>.

These books and many other resources may be borrowed by Nebraska residents from the Early Childhood Training Center. A web-based search of these media materials is offered at <http://ectc-library.education.ne.gov>.

# Glossary of Terms

**Anchor Charts**-Charts that teachers make with their students that represent and remind students of their learning.

**Rubric**-An established set of criteria upon which something is compared.

**Think Aloud**-The process of expressing your thoughts aloud while you are engaged in an activity, so others can hear them.

**Tier 1 Words**-Common words that students already know, e.g., the, happy, sad.

**Tier 2 Words**-Words that the teacher uses direct instruction in teaching them. These words will eventually become part of the child's receptive and expressive vocabulary.

**Tier 3 Words**-Words that are specialized to a particular field such as education, medicine, or psychology.

**WOW Word Wall**-A place where you would post interesting words your class comes across as they are reading. Examples might include: giddy, gigantic, bellowed. Words that you plan to teach directly to students can also be incorporated within this area.

