PreK for Maine

A Preschool Curriculum

Guiding Documents

Adapted from Boston Public Schools by the Maine Department of Education for the preschool teachers and children of Maine

Contents: Introductory Documents

Introduction to *PreK for ME*

It is easy to love children. Quite simply, they surprise and delight us with their relentless curiosity and generous nature. Many of us teach early childhood because we cherish the spirit of the young child and value the potential they represent. However, the world in which our children live, and in which we teach, is becoming increasingly more complicated. The skill and knowledge gap between children who hear and participate in engaging conversations with rich vocabulary with parents and caregivers, have been read to regularly, and have been exposed to many rich experiences in their home and community and those who have not is often quite wide. PreK can offer an opportunity to lessen that gap; but the curriculum must be comprehensive in order to help children enter kindergarten on a level playing field. The early childhood years are a critical time to set these foundational competencies in motion. Research shows that children's brains develop most rapidly beginning at birth, making this an optimal time to maximize learning. Powerful teaching is necessary for an empowered citizenry.

Why a Curriculum for Preschool?

We are continually learning from other successful public preschool settings. One of these accomplished systems is that of the Boston Public Schools (BPS). The BPS Department of Early Childhood was created in 2005, operating on the premise that by providing early childhood classrooms with a scoped and sequenced curriculum, along with coaching and professional development for teachers, positive child outcomes would result. Studies continue to show that children who attend BPS Preschool classrooms outperform their 3rd and 5th grade peers who do not attend BPS Preschool.

BPS launched a revision of the original *Opening of World of Learning Curriculum* in 2014. The Revised BPS K1 Curriculum, known as *Focus on K1* (preschool), maintains a scoped and sequenced progression of both literacy and math skills in six, thematic units. Children learn distinct concepts that are interwoven throughout the curriculum. Teachers make visible these connections and points of intersection between, through, and across units.

Having visited many preschool classrooms in Maine and heard from both teachers and principals about the challenge of purchasing and supporting an evidenced-based curriculum, the Early Learning Team at the Maine Department of Education submitted a grant proposal to the US Department of Education and were funded to adapt *Focus on K1* to fit Maine's needs. This launch will allow districts across the state to collaborate and implement a fully integrated curriculum. Educators across multiple levels are currently working together to revise and create a curriculum with activities and lessons that address the individual needs of Maine's families,

align with Maine's Early Learning & Development Standards (MELDS), and capitalize on the state's beautiful environment.

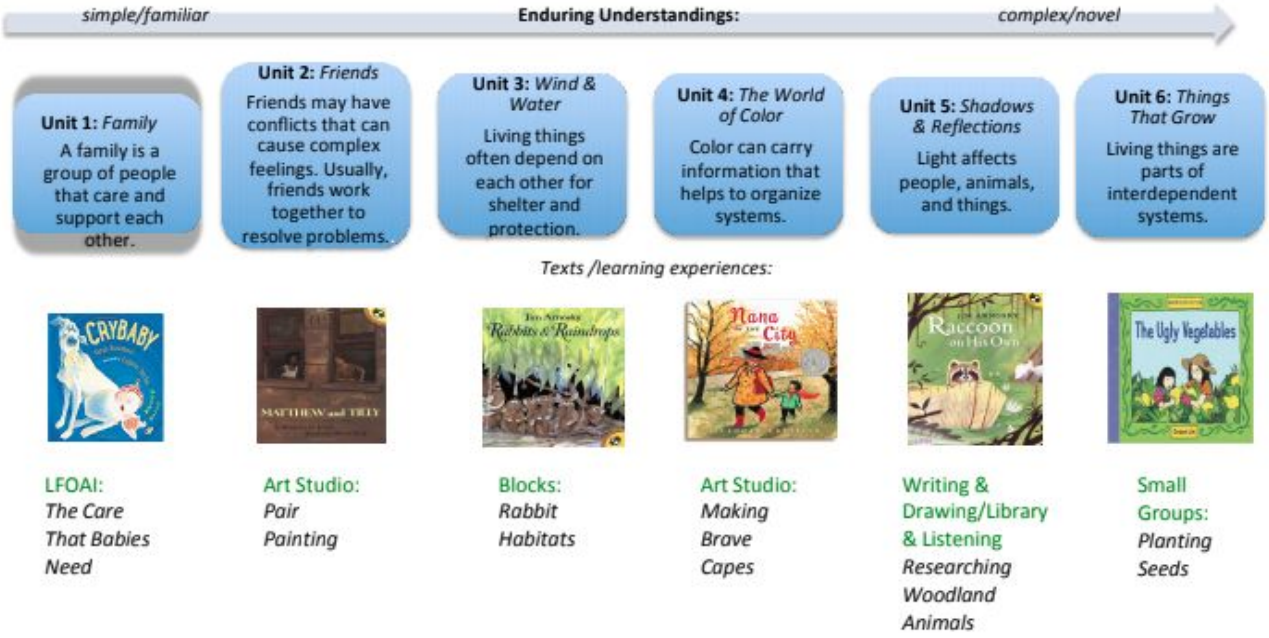
At this point forward, the curriculum will be referred to a*s Prek for ME; and* that is not to denounce Boston's *Focus on K1*. Their work is undeniably remarkable and has inspired us to provide this level playing field for our young learners. The *Focus on K1* writers and contributors are affecting the lives of not only the children of Boston, but the children within the state of Maine.

Guiding Principles of the *Prek for ME*:

- Young children are capable of complex, higher-order thinking.
- Children are active agents in their learning, especially when it is relevant, hands-on and developmentally appropriate.
- Instruction is impactful when teachers are researchers of their classrooms.
- Meaningful knowledge is constructed through robust interactions and high engagement.

Learning Condition	*PreK for ME*
Children are concrete to abstract learners.	Concepts evolve from the familiar to novel.
Knowledge is socially constructed.	Content and learning experiences create a shared understanding of skills and concepts. Interactions and relationships with peers and adults help mediate understanding
Children mature as learners.	Knowledge and skills progress from simple to complex.

Concept: A system is a set of connected things or parts forming a complex whole.



Planning for Variability

Young children arrive in our Preschool classrooms with a wide variety of competencies. They express their ideas and questions in many ways and demonstrate their particular approaches to tasks and problems in countless languages: with words, movements, gestures, artwork, symbols, stories. The *PreK for ME* uses the framework of Universal Design for Learning (UDL). Though this framework, teachers plan lessons where all children engage meaningfully and achieve goals via multiple paths of access and representation. Teachers intentionally and purposefully choose strategies and make instructional adjustments to support children's successful learning.

To help children use and categorize information:

- Use visual images for directions, vocabulary words, representing texts
- Ask questions that can be answered with one or two words (e.g., "What are you doing?" "I'm dancing")
- Paraphrase complex text
- Start phrases for children to finish ("I am pretending to be a....")
- Use "think alouds," i.e., "I notice you are using the brush to paint the box."
- Provide concrete or realistic props (e.g., hats, tools, photographs)
- Label tools, materials and features of the environment in children's home languages

- Limit clutter

To help children plan and perform tasks, and organize and express ideas:

- Create a picture schedule of the day, using Boardmaker icons, photographs or sketches
- Provide sequencing templates and other graphic organizers
- Provide picture cards to write sentences and express ideas
- Provide sentence frames
- Invite children to use physical gestures such as pointing to express understandings and ask questions
- Use a visual prompt with fewer activity choices
- Define work spaces such as setting materials for an activity on a tray
- Provide name tags for dramatic roles
- Have children work on a vertical plane such as clipping a Lego base board to an easel or back of shelf
- Add grips to pencils and markers to facilitate grasp; provide markers, crayons, pencils, brushes in a variety of thicknesses
- Provide tongs to pick up materials
- Provide pre-torn tape on a block in the middle of the table
- Model the use of materials and tools or provide targeted “tutorials”
- Limit number of materials, gradually adding more in number and type over time-less is more as the school year begins

To support child engagement:

- Offer a variety of seating: chairs with arms, rocking chairs, exercise balls, cube chairs, T-stools, bean-bag chairs
- Allow children to stand while working
- Provide movement breaks: wall push-ups, jumping jacks, floor-tape “balance beam,” etc.
- Provide headphones or earmuffs
- Add or remove environmental scents
- Create a cardboard box work space to provide privacy and limit stimulation
- Provide different textures of blocks by covering some with fabric, felt, sandpaper
- Soften sound input from the environment with large towels or yoga mats
- Offer squishy balls or other concentration tools
- Use visual timers
- Use nonverbal signals (thumbs up/down to refer to facts and to answer questions, thumb to self for “Me, too.”)

- Participate in play to support and expand interactions

Further consideration may be needed to assure accessibility based on the needs of the children in your classroom. Consult children's IEPs when planning. A helpful resource is Gould and Sullivan's *The Inclusive Early Childhood Classroom: Easy Ways to Adapt Learning Centers for All* (Prentice Hall, 2005).

Vocabulary Development: "Use Your Words"

The more vocabulary words a child knows, the more successful that child will be in school. However, it is not just the accumulation of words, but also the ability to use them in a variety of contexts, both critically and strategically, that is crucial to developing 21st century skills. *PreK for ME* uses research-based best practices to maximize vocabulary acquisition and pragmatic language skills.

Children are provided with multiple entry points and opportunities to demonstrate their understanding of words and how they are used. Developing expressive vocabulary supports children's social-emotional growth and creates a community of learners.

The high expectations for vocabulary development articulated in the curriculum are intended for all learners. There are multiple strategies offered throughout the lessons to meet the variability of learners, including visual prompts and supports, photographs, videos, songs, sound clips, realia, and kinesthetic movements.

The curriculum is characterized by robust questions and vigorous conversations that stimulate critical thinking, creativity, and collaboration. Each lesson develops conceptual understanding & background knowledge through the contextual use of tiered vocabulary. Facilitation of learning in centers is a key opportunity to synthesize intellectual language and discourse as outlined below (see also Center Language Supports).

Center	**Precise Vocabulary to name and describe work**	**Sample Power Questions to stimulate thinking**
Art	brush, technique, design	*What is your inspiration for your work?*

Blocks	height, stable, foundation	*What is your plan for your structure?*
Writing & Drawing	illustration, detail, title	*What are you representing with your writing?*
Dramatization	roles, props, character	*What does your character do and say?*

Using the Guide

The Guide is a support for teachers to implement the curriculum. While it is important to maintain the Enduring Understandings, address the Essential Questions, and to follow the scope and sequence, teachers should make informed instructional decisions that are responsive to the needs of their children.

Set up for Success, a resource available on the BPS Early Childhood Website, https://www.bpsearlylearning.org/focus-on-k0-k1, is a primer of how to establish a positive classroom climate and offers teachers a guide to laying the foundation for a successful year.

Unit Guide Contents:

- suggested Weekly Plans
- weekly Materials lists
- Centers with Resources
- Center Language Supports
- Read Alouds
- Songs, Word Play, Letters (SWPL)
- Small Groups
- Let's Find Out About It (LFOAI)
- Math Lessons
- Outdoor Learning Ideas
- Using Technology to Support Learning (stay-tuned…)

Read Alouds
(20 minutes)

Reading books to children is a fundamental early childhood practice. In PreK for ME, what we read and how we read to children is based in research and intentionally and powerfully supports their early literacy skills. Two main literacy goals of *PreK for ME* are vocabulary development and story comprehension, both strong predictors of school success and necessary skills in becoming literate. Core texts are chosen for their complex plots, interesting characters, and challenging vocabulary.

The Read Alouds anchor the other components of the curriculum, making every component an opportunity to expand vocabulary and deepen comprehension. Learning experiences during other parts of the day (Centers, Small Groups, and Let's Find Out About It) all work together to enhance interest, comprehension, and vocabulary development.

There are multiple reads of each core text. Rather than simply repeating the book word for word, each read of the book employs a specific strategy to develop children's interest, comprehension, and vocabulary.

Different Reads

Read #1: "Orientation"	The text is read through with minimal interruptions, as this may be the first time children have encountered the book. ● The *focus* is on providing information about the main character and the story's central problem and goal. ● Teachers pause during this read to provide brief clarifying information and to highlight/define 5-10 new words. ● Discussion happens *after* the story. Questions connect to the children's experiences, i.e., "Peter has a dog in this story. Do you have a dog or cat?"open the door to potentially distracting/off-track discussions that take children away from the text at hand. ● Teacher guide discussion by asking and inferential- "why" or "how"- questions about something not stated explicitly in the text . i.e. "Why do you think Peter decided to allow his dad to paint his chair pink?"

Read #2: "Deeper Vocabulary"	Teachers read the story a second time, reinforce what children already know, and extend their knowledge of the vocabulary and plot. ● The *focus* is on further clarifying points of confusion. Teachers add more information to children's responses when necessary. ● Continue to define the vocabulary words from Story Reading 1 and include additional vocabulary. Include words that may need more verbal definitions. ● Deepen the comprehension of primary characters, story problem, etc. ● Explain the feelings or thoughts of the secondary characters. ● Repeat illustration or scene changes if book is more complex or necessary for understanding ● Continue to model analytical thinking. ● After reading, use follow-up questions if appropriate to guide children's responding by using text & illustration information and helping children connect events. Use relevant data.
Read #3 "Reconstruction"	Teachers and children jointly reconstruct the story, reinforce what they know, and extend their knowledge of the vocabulary and plot. <u>To support reconstruction:</u> ● Use phrases such as "We remember…" or "We know what is happening here.." ● Determine when to turn the page and when to wait for children to respond. ● Extend-clarify or add more information to children's responses, as appropriate. ● Read parts of the text to move story along, to clarify or when the illustrations may not correlate to the text, to emphasize character's thinking or dialogue. ● Continue to define words as necessary. Include others if needed

	● After the read, further deepen children's comprehension based on comments and questions. ● Continue to model analytical thinking. ● If there is time, consider a question that supports children with making connections across texts.
Read #4: "Acting Out"	Children dramatize different points of the plot as characters in the story. Children demonstrate their comprehension of the story by using dialogue and gestures the characters would use. ● Discussion and questions for this read delve further into the characters' feelings, plans, and motivations, as well as relate to children's experiences, i.e., "Peter had a 'change of heart' about his baby sister. Have you ever had a 'change of heart' and what did you do? How was that the same/different than Peter?"

Thinking and Feedback
(10 minutes, following Centers)

Thinking and Feedback is a time for children to learn from and with one another, discuss and reflect on their work. The conversations during this time help build a supportive, intellectually engaged, and dynamic classroom community. Through the process of observing, listening, and asking and answering provocative questions, children deepen their understandings of content. As they consider works in progress, children generate new ideas, integrate different perspectives, contribute to each other's learning, and build group knowledge.

Materials:

- artifacts or documentation of center work (e.g., painting, sculpture, written work; projected photographs or video of group working; materials from the center; etc)
- teacher note-taking supplies (clipboard and pen, notebook, post-it notes, technological resource, or other system)
- Thinking and Feedback protocol visuals

Process

Thinking and Feedback is a whole group meeting that follows Center Time. Children should not be solely focused on the steps, but on the content of the conversation.

Preparation During Centers:
Observe children during Centers. Identify one piece of work from a child or a group of children to highlight. Perhaps some children have discovered something that might inspire others in the group. Or a child might be struggling with her work and benefit from feedback. There may be a piece of work to highlight for curriculum purposes. Or a child who normally isn't recognized by her peers might have made a discovery that you to acknowledged.

Prior to the whole group meeting, plan with the child(ren) who will be sharing their work. See if they have specific questions, or would like any specific feedback from the whole group. Gather any necessary documentation or artifacts to bring to the meeting. This preparation will allow for a process to elicit feedback and descriptive conversations, and move beyond a "Show and Tell".

During Thinking and Feedback:

- Invite the children to sit in a circle. Place the documentation or artifacts in the center, or on an easel so that everyone can see.
- At the beginning, introduce the "Agreements for Feedback" to the children. The basic guidelines are: Give kind, helpful and specific feedback. Receive feedback in the constructive spirit in which it is given. It is your choice to take or not follow feedback.
- Introduce the child(ren) who is sharing (e.g., "Today, Lauren and Diego were working on a sculpture in the Art Studio. They were using Beautiful Stuff to create a sculpture, and used several types of adhesives.").

Use the Thinking and Feedback protocol and visuals to structure the conversation:

Looking	the whole group silently and carefully looks at the work
Noticing	children in the group describe what they see in the work (presenters remain quiet)
Listening	presenting children tell about the work and ask questions and/or request specific feedback from the group
Wondering	children in the group ask questions of the presenters
Suggesting and Inspiring	children provide feedback and articulate ideas that are inspired by what's shared

Note: Phase in the use of the protocol during the first few days of school. Begin with Looking, Noticing and Listening and then add Suggesting/Wondering and Inspiring as children master the protocol.

- Take notes on the feedback provided ("Suggesting" and "Inspiring" will be particularly important times to take notes). These notes will serve as a reminder so you can share the children's ideas back with the group the next day.
- Remind children when there is "time for one more suggestion or comment."

The following day:

Remind the children of important feedback offered at the previous Thinking and Sharing time. This can happen at Introduction to Centers as children plan for centers (e.g., "Yesterday at Thinking and Feedback time Kervin suggested that to make a block structure more stable you could put blocks around the base. If you want to try this today in the Block Center…). Feedback

can also be shared during Center Time in specific centers (e.g., “Yesterday you said you were inspired by Javon’s painting...).

Guidelines for sharing work:

- Highlight just one activity or piece of work each day in order to allow for a deep conversation about the topic.
- Invite groups, rather than individuals, to share collaborative work whenever possible.
- Focus on works-in-progress so that feedback can be used to improve work.
- Invite adults to give feedback in order to model how to provide kind, helpful and specific feedback and provide children additional ideas about their work. Modeling can include asking open-ended questions during the “wondering” phase of the protocol (e.g., How did you decide to sort these stones?; How did you construct that habitat? What materials did you use?; What are you planning to do next?) and providing specific ideas during “Suggesting.” While it is helpful for adults to offer ideas, **the vast majority of feedback should come from the children**.
- The children should lead this process as much as possible, with a gradual release of responsibility.
- Use documentation and artifacts to support and ground the conversation. For projects that cannot easily be moved to the meeting area (a block structure, mural, etc) it may be helpful to gather in that center for sharing or take a picture to bring to the group.
- Keep a list to let children know in advance when they will have a turn to share. All children should have opportunities to share work over time. Consider the particular needs of the children in the group when devising a system for keeping track of who has shared.
- For children who have more limited oral language skills, use other communication strategies such as visual aids.
- Thinking and Feedback is also an opportunity for group self-reflection on Center Time. Teachers can also engage children in assessing the group learning experience by posing questions about a particular activity or event that occurred during Centers that day. Use open-ended questions to encourage thinking, and group problem solving. For example:
    - What worked well?
    - What did you notice?
    - What do we need to change to make it better tomorrow?

Math for ME
A Math Curriculum for Maine's Preschool Children

Welcome to *Math for ME*, a math curriculum designed for use with preschool-aged children in Maine. *Math for ME*, as part of the overall Pre-K for ME curriculum, presents early math concepts and skills in an engaging, developmentally appropriate, and sequential manner. The curriculum integrates the math content of the Maine Early Learning and Development Standards [MELDS] into all Unit Goals and Objectives.

Overall Goal:

To create a strong foundation for mathematical thinking and learning for preschool-aged children in the key areas identified in the MELDS Math Standards developmental pathways: Mathematical Practices; Counting & Cardinality; Operations and Algebraic Thinking; Geometry; Measurement & Data.

Assumptions and Approach:

- All children are natural mathematicians.
- Learning should be accessible for all learners.
- Depth of understanding is emphasized over breadth.
- Problem-solving using mathematical thinking and tools is essential for school success.
- Experiential, active learning is the basis for learning activities.
- Math is integrated into other learning activities and is also a discrete content area.
- Intentional teaching strategies are balanced with discovery learning.
- Observation and informal assessments guide planning.

Objectives:

- Associate math with enthusiasm and practical application to everyday life
- Use the MELDS continuum of learning (developmental pathways)
- Nest curriculum into overall Curriculum, providing context through some Maine-themed materials.
- Provide learning activities that support development of outcome-based concepts and skills.
- Connect math learning with other learning domains.
- Strategically link teacher instructional practices to desired learning outcomes
- Provide professional development for understanding and implementation

***Math for ME*- Organization**

General:

- Overall Goals and Objectives
- Core Constructs – Foundational Ideas for School Year
- Content and Concepts- Scope and Sequence Units 1-6
- Resources for Reference
    - Foundation, Philosophy and Approach
    - MELDS Math Standards, in Scope and Sequence from Units 1-6
    - Professional Learning and Development Materials

Units:

Units- 6 Units, 5 Weeks Each Unit. 5th Week in each unit is a Bonus Week for Problem Solving and Reinforcement of Unit Concepts. Units can be expanded as needed to accommodate seasonal/theme week, and school district calendars.

- Unit Overview with Scope and Sequence of Concepts Highlighted for that Unit
- Activity Plans
- *Where's the Math?*- Teacher Supports for Unit Concepts

CORE CONSTRUCTS- Overall Goals for Components across Units

Mathematical Practices

Children Are Competent Mathematicians

Math Helps Solve Problems

Math = Communication

Counting & Cardinality Cluster

Counting Determines Quantity

Numerals and Math Symbols Represent Math Ideas

Seeing, Saying and Representing Cardinality Involves Multiple Concepts

Operations and Algebraic Thinking

Determining *How Many?* Is the Goal of Early Math

Math = Finding Relationships and Patterns

Math Ideas Appear In Many Modes And Contexts.

Geometry (includes Classification)

Forming and Applying Ideas of Shapes and Spatial Relationships

Composing & Decomposing Figures

Measurement & Data (includes Classification and Patterns)

Finding Measurable Properties and Exploring Measurement Methods

Practical Application of Measurement

Data -Gathering, Organizing And Using Information to Make Meaning and Solve Problems

Math for ME- Scope and Sequence of Math Content and Concept Learning Progressions

Core Construct = The Overall Goal for the Year That Applies To All Units

MELDS COMPONENT **CORE CONSTRUCT** **Concept**	UNIT 1 FAMILY	UNIT 2 FRIENDS	UNIT 3 WIND & WATER	UNIT 4 WORLD OF COLOR	UNIT 5 SHADOWS & REFLECTIONS	UNIT 6 THINGS THAT GROW
MATHEMATICAL PRACTICES **CHILDREN ARE COMPETENT MATHEMATICIANS** **Attitudes/Approach**	Learning math starts with discovery and exploration.	Participating in Math Activities with friends.	Using math to observe the weather.	Playing games = engaging with math concepts & skills.	Science and math concepts help us understand shadows.	Math is energizing and useful in many contexts: school, home, and the surrounding environment.
Usefulness (Mathematizing)	We use math every day: Connecting to number in real world	Math in our Classroom- Routines and activities	Math helps us describe and make sense of the physical world.	Math ideas relate to games & outdoor play (comparisons, quantity, subitizing)	Math is embedded in learning projects (Uses math in STEM activities)	
Problem Solving **MATH HELPS SOLVE PROBLEMS**	What is a problem? Introducing math into problem solving.	People work together to solve math problems	Gathering Information (data) to help solve problems	Finding patterns in data to help solve problems.	Generating and testing solutions to problems [STEM]	Solving practical problems using geometry and measurement data: Planning a garden.
Communication (Mathematizing) **MATH = COMMUNICATION**	Naming our math center and math activities	Math has special vocabulary. (e.g. 3D and 2D shapes/comparison words)	Math words and math ideas appear in story-books, outdoors and home.	Identifying math words and math ideas that appear in story-books, outdoors and home: subitizing, patterns, etc.	Growing accuracy and expanding use of language of math (verbal and non-verbal).	Applying the many "languages" of math in multiple contexts.

MELDS COMPONENT CORE CONSTRUCT Concept	UNIT 1 FAMILY	UNIT 2 FRIENDS	UNIT 3 WIND & WATER	UNIT 4 WORLD OF COLOR	UNIT 5 SHADOWS AND REFLECTIONS	UNIT 6 THINGS THAT GROW
<u>COUNTING & CARDINALITY CLUSTER</u> **COUNTING DETERMINES QUANTITY** **Counting** **Rote & Rational**	Practicing the number word list through words & action.	Practicing the number word list through words & action. Transition from rote to rational counting strategies: One object has only one name	Rote Counting Strategies: Numbers have an order. Correcting errors. Transition from rote to rational counting strategies: Counting dissimilar objects	Rote: Expanding the number word list to 20 and beyond. Transition from rote to rational counting counting Strategies; Connecting groups to number names	Rote Counting Strategies: Finding patterns in counting above 10. Transition from rote to rational counting strategies– Order irrelevance; Keeping track of numbers counted	Counting the same group of objects results in the same result. [Stability of sets and Order irrelevance] Using and applying rational counting to questions of quantity
Numerals **NUMERALS AND MATH SYMBOLS REPRESENT MATH IDEAS**	Some writing marks are called numbers (numerals) and others are letters.	Identifying/naming number symbols in the environment.	Matching numerals with their names (0-5). Exploring writing numerals	Matches numerals with their names (0-10). Exploring Writing numerals with intent.	Writing number symbols up to 10.	We communicate math ideas using number symbols.
Cardinality **SEEING, SAYING AND REPRESENTING CARDINALITY INVOLVES MULTIPLE CONCEPTS.** **Subitizing**	Grouping objects of 1 or 2 (arbitrary or attribute-based)	Grouping of objects and describing likes and differences	"Seeing" groups of numbers automatically up to 5. (perceptual subitizing)	"Seeing" groups (up to 5) and sometimes using them as a counting strategy	Exploring the "5" group in activities.	Relating counting and cardinality with increasing accuracy: labeling groups with various arrangements arrays.
Cardinality		Using a number word or some form of Counting to answer *How Many?*	Counting groups of objects or persons and assigns a number name .	Counting groups of objects or persons and assigns a number name (Increasing accuracy)	Showing understanding that *How many* means the last number counted and represents the amount in the entire group.	

MELDS COMPONENT CORE CONSTRUCT Concept	UNIT 1 FAMILY	UNIT 2 FRIENDS	UNIT 3 WIND & WATER	UNIT 4 WORLD OF COLOR	UNIT 5 SHADOWS AND REFLECTIONS	UNIT 6 THINGS THAT GROW
<u>OPERATIONS AND ALGEBRAIC THINKING</u> Quantity DETERMINING *HOW MANY?* IS THE GOAL OF EARLY MATH	Introducing Number Questions	Responding to Number Questions with Demonstration or Words.	Beginning to count from 1 onward when asked how many. Gives an answer. Number words refer to quantity.	Showing understanding that *How many* means the last number counted represents the entire group.	Showing understanding that *How many* means the last number counted represents amount in entire group.	Combining ideas of 1:1 correspondence, cardinality and number stability to understand quantity.
Relationships MATH = FINDING RELATIONSHIPS AND PATTERNS. 1:1 Correspondence & Other math relationships (< > + - =)	Demonstrating perceptive (intuitive) number in play or other daily activities	1:1 Correspondence is a special type of relationship—one name, one object. (See rational counting)	Beginning comparison of groups for more or less (visual estimating/ some counting).	Beginning to compare groups using counting strategies (up to 10). Beginning to recognize parts/wholes of number groups.	Counts groups and begins to compare numbers < > += (up to 10) Finding number partners: number within numbers (up to 5).	Comparing groups of numbers < > + - = using word, actions or objects. Beginning to compose/decom-pose numbers (up to 5)
Representation MATH IDEAS APPEAR IN MANY MODES AND CONTEXTS. Physical verbal Modeling	Objects can represent other objects.	Representing number with words signs or gestures.	Number can be represented by manipulatives (unit blocks, counters) and symbols and people.	Drawing, describing or showing with manipulatives how number names relate to groups.	Beginning concepts of Adding and Taking (up to 5) Away (varying ways of representing)	Communicating addition and subtraction with fingers and manipulatives. (up to 5)
Tools for Representing Number & Relationships		Exploring number matching puzzles and manipulatives to represent relationships	Using number matching puzzles and manipulatives to represent relationships	Introducing number paths. Identifying a story problem.	Using number paths and grid games as a counting tool. Using story problems to visualize operations	Beginning to use number paths and grid games to communicate math ideas. Acting out story problems to visualize operations up to 10.

MELDS COMPONENT CORE CONSTRUCT Concept	UNIT 1 FAMILY	UNIT 2 FRIENDS	UNIT 3 WIND & WATER	UNIT 4 WORLD OF COLOR	UNIT 5 SHADOWS AND REFLECTIONS	UNIT 6 THINGS THAT GROW
<u>GEOMETRY (INCLUDES CLASSIFICATION)</u> **FORMING AND APPLYING IDEAS OF SHAPES AND SPATIAL RELATIONSHIPS** **Shape** **3D-2D** **Attributes**	Manipulating and building with 3-D Shapes	Finding 3-D and 2-D shapes in the environment and using words to describe geometrical figures.	3D and 2D shapes have different attributes and uses. Discovering and describing some attributes of shapes.	Classifying shapes by describing and comparing some attributes.	Copies or represents shapes using manipulatives or drawing.	Growing accuracy in discovering, describing and comparing attributes of shape: Exploring grouping shapes by characteristics.
Parts/Wholes **COMPOSING & DECOMPOSING FIGURES**	Taking apart and putting together toys, puzzles & manipulatives	Taking apart and putting together toys, puzzles and manipulatives and sometimes describing parts and wholes	Identifying the parts of objects in the classroom and outside world and relating those parts to whole.	Using shape puzzles and shape manipulatives for parts/whole understandings	Putting a variety of shapes together to make objects or pictures. Identifying words for part/whole concepts.	Taking apart shapes and reassembling. May identify parts.
Space (Spatial relations) **Orientation** **Directionality**	Informal spatial movement: Moving our bodies in many different directions	Recognizing and responding to Directionality and Orientation words or commands	Moving objects and our bodies and describing relative positions in space. (Move-ment patterns or models such as maps)	Playing games and initiating activities that involve directionality and orientation.	Orientation: Shapes are still the same shape, despite their orientation (Intro to slides, flips and turns). Identifying shape and space concepts in STEM activities	Orientation: Manipulating and describing 2-D Shapes by Slides flips and turns Integrating shape and space concepts in class projects and problem solving.

MELDS COMPONENT CORE CONSTRUCT Concept	UNIT 1 FAMILY	UNIT 2 FRIENDS	UNIT 3 WIND & WATER	UNIT 4 WORLD OF COLOR	UNIT 5 SHADOWS AND REFLECTIONS	UNIT 6 THINGS THAT GROW
<u>MEASUREMENT & DATA (INCLUDES CLASSIFICATION AND PATTERNS)</u> **FINDING MEASURABLE PROPERTIES AND EXPLORING MEASUREMENT METHODS** **Measurement Tools**		Exploring measurement tools indoors and outdoors.	Matching measurement tools to their purposes: measuring water; temperature	Mixing and creating colors using measurement tools.	Using tools to measure and compare shadows.	Solving problems using some form of measurement method and tools.
Measurement Methods & Attributes		Exploring and describing Measurable Attributes in everyday activities. May use seriation	Experimenting with measurement: Directly comparing 2 or more items on an attribute.	Experimenting with measurement methods Using measurable attributes to organize materials.	Experimenting with measure-ment methods Non-standard measurement	
Specific Language & Concepts **PRACTICAL APPLICATION OF MEASUREMENT**	Everyday use of measurement words in play, at school and at home.	Growing use of accurate measurement terms: Exploring the Language of Time in classroom routines	Growing use of accurate measurement terms: Exploring temperature and capacity/volume	Growing use of accurate measurement terms: Exploring weight and mass. Describing past, present and future events.	Growing use of accurate measurement terms: Exploring length and distance: Continuous and discrete measurement	Demonstrating the practical use of measurement (including data skills) to solve problems in everyday life
<u>Data</u> **GATHERING, ORGANIZING AND USING INFORMATION TO MAKE MEANING AND SOLVE PROBLEMS**	Matching and grouping (Attribute recognition)	Describing, sorting and classifying collections. (Self-described or in response to questions)	Growing use of discrete attributes for classification/sorting strategies to organize collections of things. Discovering patterns in movement song or materials.	Organizing data: Recording data graphically in charts & graphs. Describing patterns.	Growing abilities to recognize, copy describe and create patterns.	

Math for Me Curriculum Foundation

The Math for ME Curriculum is based on these Essential Questions (as adapted from various works of Dr. Lillian Katz:

- What should be learned?
- When should it be learned?
- How is it best learned?
- How can the learning best be demonstrated?

Katz Principles	Math for ME	Tools and Supports
WHAT SHOULD BE LEARNED?	MELDS developmental pathways: Mathematical Practices; Number and Operations; Geometry; Measurement & Data. Problem solving, math communication, and positive attitudes are critical and essential components of Math for ME	Specific Goals & Objectives are featured in each Unit and its Activities. Mathematical Practices/Strategies are included in each Unit Tips for math language and mathematizing everyday experiences are part of each unit. Bonus weeks include problem solving, math environment/ throughout the day, and ideas for enrichment.
WHEN SHOULD IT BE LEARNED?	MELDS continuum of learning (developmental pathways) shows flow of learning prior to, during and after preschool ages [connection to Kindergarten goals] Math skills typically build on prior learning. Children develop math understandings unevenly across concept areas.	Curriculum is designed in 5-week Units that introduce and build skills across the school year. Each unit has MELDS indicators from all content areas. Flexible design allows Teachers to focus on basic skills as needed for mastery.Repetition, adaptation or expansion of activities to facilitate understanding is expected and encouraged.

HOW IS IT BEST LEARNED?	Experiential, hands-on learning is foundational to early math. Learning activities are appropriately challenging and support the development of specific concepts and skills that are outcome-based Environment supports math learning through multiple sensory, diverse experiences, throughout the day. Math is integrated into other domain/learning projects and also purposefully featured.	Math is learned in context. Play-based learning includes: discovery/exploration, guided learning, small group, individual instruction, and some whole group activities. Materials, including manipulatives, are associated with specific learning objectives as well as discovery learning. The entire environment is used as a canvas for creative math learning including: Routines and Transitions; Outdoor Play; Meal times;

Let's Find Out About It
(15 minutes)

Let's Find Out About It (LFOAI) provides children with additional information about specific concepts that are introduced during Read-Alouds through the use of non-fiction texts, realia, and technology.

Through this whole group meeting, clear and concrete connections are made to the Read-Alouds. The teacher emphasizes key vocabulary, presents information, demonstrates concepts, and clarifies potential misunderstandings. Children apply knowledge and understanding gained in LFOAI to enhance their learning in Centers, Small Groups, and throughout the day.

Outdoor Learning

"The reason he wanted to know was because he was Leonardo: curious, passionate, and always filled with wonder."
From *Leonardo Da Vinci* by Walter Isaacson

Introduction to Outdoor Learning

Outdoor learning, also known as nature based education or environmental education, has always been an integral part of early childhood education. Nearly 200 years ago, Friedrich Froebel, the father of the kindergarten, advocated for children to plant and care for gardens. During the time of the nature study movement, over one hundred years ago, Maria Montessori, believed that children needed access to outdoor areas to care for animals and gardens. She connected nature education with the natural development of the child. Rudolf Steiner, who created the Waldorf school in 1919, believed that allowing children to play with natural materials builds a foundation for scientific understanding. Unfortunately, children are becoming less connected to their natural surroundings than ever before. There are many reasons for this change. We live in a world of social media and sedentary technology that keep children inside. The places children are allowed to roam has shrunk creating an *extinction of experience* (Robert Michael Pyle – *The Thunder Tree*) where children never know the wanderings in natural habitats that their parents and grandparents did. We can site parental fears, that may include a fear of strangers, risk taking, and traffic, as culprits. In this competitive world there is also a push for academics at younger and younger ages. But we live in Maine, a state of incredible beauty and a higher percentage of trees than all other states in America. The purpose of this section, integrating outdoor learning in the *PreK for ME* curriculum, is to provide children with the opportunity to express their innate tendency to connect with the natural world and to develop an ecological identity. We also find that outdoor learning increases children's ability to focus on academic pursuits and can be a vehicle for children's development.

There are many ways to provide children with a connection to nature no matter what your access to natural spaces or your experience might be. At the least, bringing natural materials, plants, and animals inside the classroom provide natural and living things for the children to use in their play and centers. Fenced in outdoor playgrounds can be naturalized to include gardens, flowers, and loose parts such as tree stumps, logs, and tree cookies. When children have opportunities to interact with these natural materials, they begin to connect to authentic objects that are meaningful to them. This enables the children to use their imagination and creativity, as these materials have high play affordances. And if your school has access to a more wild area such as a forest to hike in, a pond to visit, or other natural habitats to discover, children begin to understand their place in the natural world. Place based education begins

with nature education and an intimate knowledge of one's local surroundings. How can children begin to know their local environment if they don't spend time outdoors?

These guidelines provide the basics for taking children outside, the benefits of connecting children to nature, and an overview of seasonal concepts that relate to, foreshadow, and follow up on the topics for each unit in *PreK for ME*. The hope is that you will feel comfortable taking children outdoors as an integrated part of the curriculum, allowing for exploration so curiosity and wonder will take hold.

Overall goal – to connect young children to the natural world, use nature as a vehicle for children's development, encourage an environmental ethic and ecological identity, and support environmental literacy.

Why is it important?

The benefits of connecting children to nature are numerous and include all domains of early childhood. The most obvious one is in the area of physical development. Hiking on trails, balancing on logs, and climbing trees help to develop large motor skills. Fine motor skills are also developed by picking up sticks, small rocks, sunflower seeds from a sunflower head, or catching insects. Physical activity also provides oxygen to the brain supporting neural connections. Crossing the midline of the body, when sweeping with nets to catch insects, raking leaves, or digging with a shovel, allow the two sides of the brain to communicate. Everything in the natural world helps to develop sensory skills as all the senses are used when exploring outdoors (e.g. listening to bird songs, smelling flowers, touching tree bark, and observing changes throughout the seasons). Multisensory experiences also promote brain development.

Social and emotional development are supported when children work together to build a fort or pick up a log. Cooperation is essential in these activities. The natural world provides many opportunities to solve problems, thus increasing problem solving skills that usually involve a group of children working together. Children often find different friends in these situations than they would if they only interacted with them inside. Children develop empathy when they have opportunities to care for gardens or animals. And children feel a sense of accomplishment and confidence when they are able to climb up a tree or make it to the top of a hill. Spiritual development is supported as children experience a sense of wonder and awe when encountering the natural world.

By spending time outdoors, children begin to observe the changes that happen on a daily basis, thus increasing their observation skills. Noticing the changes in the environment, paying attention to the movement of the animals, and focusing in on life cycles of the flora and fauna support development of these skills. Using rich vocabulary to describe what is found outside and creating stories to understand the tracks in the snow or what might be in a hole in a tree help to improve communication skills.

Opportunities abound for appropriate risk taking when outside. When children climb trees, balance on logs, climb up a hill, or walk across a creek on rocks they are taking risks. However, it is important that they are allowed to assess their own risks and work toward achieving them. Children figure out their body in space by taking these risks and they become more confident when allowed to. Children develop environmental literacy when exposed to different habitats and given the chance to explore in natural areas. Brain development is supported through decision making that occurs when exploring a changing environment.

Connecting to nature allows children to love the natural world, eventually becoming stewards of the environment. Nature study becomes a foundation for conservation values. Rachel Carson and Aldo Leopold, two of our most famous environmentalists, grew up in the nature study movement. Needless to say, the benefits of taking children outdoors are numerous and they provide opportunities for all children to be successful.

Assumptions and approach

Nature based education is predicated on the following assumptions. As early childhood educators, we know that **children learn best through play**. Providing unstructured time outdoors with plenty of natural loose parts enables children to use their imagination, experiment, and solve problems. **Children need authentic experiences** to help them understand the world. What better place to have them than outdoors in natural areas. Curiosity is supported as children discover animals and plants while exploring. Vocabulary increases dramatically as children find ways to describe their surroundings. **Children benefit from appropriate risk taking**. There are so many opportunities to take appropriate risks in the natural world. It is the teacher's job to remove the obvious hazards, but the children's responsibility to assess their own risks with the teacher's guidance.

Guiding Concepts

There are several guiding concepts that are important for children when providing nature experiences. These are core constructs or overall goals for components across units. They include:

- Developing a sense of community and comfort in nature
- Being respectful of living things
- Considering our personal relationships to nature
- Nurturing curiosity and engagement
- Experiencing joy and wonder in nature

Outdoor learning includes various ways of interacting with nature and natural materials. Stephen Kellert from Yale University suggests three kinds of contact with nature; vicarious, indirect, and direct experiences. Vicarious experiences with nature do not involve contact with nature, but rather representations or images of nature such as in picture books, fairy tales,

movies, puppets, etc. Indirect experiences with nature do involve actual contact with nature, however, in controlled environments under supervision by adults such as at zoos, museums, nature centers, involving pets and gardening. Direct experience with nature is when children have direct contact with animals and plants in a spontaneous and unsupervised way in natural habitats such as a forest, creek, pond, park, or even their own backyard. Although most of children's experiences in school involve controlled activities supervised by adults and would fall under vicarious or indirect contact with nature, there may be some opportunities to provide direct contact with nature in a safe and secure way. It is important to consider these three types of experiences when looking at the various ways you can support children's contact with nature. These encompass natural materials used in the classroom, unstructured play in natural playgrounds, and structured hikes and activities in wild natural areas.

Natural materials used indoors in different centers and small and large group times as an extension of outdoor learning

Providing natural materials in the classroom is an intentional way of exposing children to nature. Including natural materials in different activity centers give children the opportunity to explore these materials in an unstructured way. Various centers are listed below with suggested natural materials to include:

- Art studio – Clay, acorns, dried leaves, branches, twigs, pinecones, pebbles, shells, seeds and flowers. Choose items that are available each season and change them on a regular basis. Feathers and evergreen branches can be used for painting. Other materials in collages. Let children experiment with the materials.
- Blocks – Wooden blocks in various sizes (hollow, unit), tree blocks, wooden figures of people and animals, rocks and pebbles, small stones and sticks.
- Discovery (sensory) table – Sand, water, leaves, feed corn to shell, sunflower heads with seeds to remove, soil, snow and ice, pinecones, pebbles of various sizes, rubber worms, plastic insects and flowers.
- Dramatization – Dress up costumes to become animals such as butterfly and bird wings, animal hats, and fur capes. Explorer outfits and hats, veterinary medical garb and kits, animal puppets. Materials to turn the dramatic play area into a vet office, farmer's market, campsite, pumpkin patch, garden center, firewood store, fishing pond, tree house, flower shop, maple sugar camp, science lab, and nature center.
- Library – Fiction and non-fiction books about nature. Include pro-nature books that depict plants and animals accurately. There are many wonderful picture books (see resources for each unit). First field guides for birds, trees, mammals, reptiles, amphibians, insects, fish, and wildflowers should be available. The Audubon series provides excellent photos.
- Writing and Drawing – Nature journals, tree pencils, wooden letters, trail maps, colored pencils, paper making materials.
- Math – Objects to sort, categorize, count and use for one-to-one correspondence such as rocks, sea shells, acorns, feathers, and pebbles.

- Puzzles and Manipulatives – Large floor puzzles and small wooden puzzles of different habitats and animals, wooden construction toys like lincoln logs, board games relating to animals and plants.
- Science – Binoculars, magnifying lenses, bird nests, feathers, animal pelts and bones, shells, tree parts, snakeskins, turtle shells, cocoons, insects, and field guides.
- Include plants and animals throughout the classroom. Animals might include live earthworms in a classroom worm bin; salamanders, tree frogs, turtles, and toads in some type of aquarium habitat; rabbits or guinea pigs. Plants should be non-toxic and located where they can be enjoyed and cared for. Children can be given responsibilities to water the plants and feed the animals. Bring animals in the classroom that the children find outside (e.g. earthworms, pill bugs) and set up a habitat for them. This is a great way for children to observe local animals and care for them. After a week or two, the children can let them go.

Unstructured play in natural playgrounds and habitats

When looking at your outdoor areas, keep in mind that children will interact physically with their environment. There should be areas where children can jump, run, and climb safely. Trees, logs, stumps, hills, and open spaces can support these inclinations. The area should have plenty of loose parts such as tree cookies, stumps, logs, and rocks. Provide children with time to play in natural settings, as the natural world invites children to use their imagination. Mud-kitchens, sand boxes, digging areas, stepping stones, sorting tables, tree houses, lean-tos, teepees, wigwams, and log cabins provide spaces for imaginative play and shelter. Provide tools for exploration such as magnifying glasses, shovels, baskets, and buckets. Some type of water source is also recommended such as a rain barrel, water pump, water table and spray bottles. Unstructured play can also be supported in natural habitats such as a clearing in the woods. If you take children on a trail and stop to play, be sure and set up the boundaries so it is clear where the children can roam.

Structured hikes and group activities in wild natural areas and habitats

If you have an area where you can take children for a hike such as a forest, here are some guidelines that might be helpful in getting started:

- Make a hiking sandwich – adults are the bread in the front and back and the children are the filling in between (they can choose what they want to be – peanut butter, jelly, salami, pickles, etc) so they stay within the adults while on the trail.
- Children should be allowed to have fun and explore while hiking.
- Stay on the trails
- We may see, touch and smell plants, but should never pick or taste them
- Children should respect one another's "safety bubbles" and give each other room while hiking.
- Hikes should be less focused on the destination, and instead open to whatever you may find along the way.

When getting ready to hike ***be sure to pack a backpack*** with the following essential items:

- Radio or cell phone to be able to contact your school
- First aid kit containing bandages, rubber gloves, sting relief, eye wash, eye pads, drawing pads, roll gauze, first aid tape, scissors, safety pins, sterile applicator, cold packs, tick removal kit and tick removal instructions.
- Moist wipes
- Hand sanitizer
- Clean tissue and dirty tissue bags
- Emergency contact forms for each child
- Epi-pen and medications for individual children as required sealed in individual bags with the children's names on them and necessary paperwork
- Camera for documenting experiences

Other things that you may want to include depending on the nature of your hike include:

- Paper and pencil or other art supplies
- Journaling supplies
- Field guides
- Hoops for up-close micro-investigations
- Magnifying glasses and boxes
- Identiflyer
- Stuffed animal
- Clippers for collecting natural materials/clearing branches at eye level
- Hammer with spike for testing ice
- Children's books
- Outdoor snack

Rules and expectations communicated before hiking:

- One adult in the front and one in the back and the children remain in between
- Hike with bodies apart and feet on the trails
- Everyone should use the bathroom before going outside
- Dress appropriately for the weather – there is no such thing as bad weather (usually), just bad clothing
- A good set of "Five Hiking Agreements" (from Schlitz Audubon Nature Preschool) are, "keep your feet on the trails, stay between the teachers, give each other space, be kind to nature, and HAVE FUN!"

On the trails/outdoor exploration

- Provide a special "hiking stick" to the person at the front of the line. This way children can lead the way once they have had experience on the trail.
- Play the "predator/prey" game on the trail

- Bring scavenger hunts of various kinds for children to find (pictures)
- Play camouflage game
- Move like different animals
- Play the alphabet game finding shapes that look like letters and/or things along the way that start with different letters
- Encourage children to use their senses to explore
- Encourage children to notice the changes that have occurred in nature from hike to hike
- Build animal shelters out of sticks
- Look for signs of animals: scat, footprints, shelters, fur, feathers, food, rustling, chewed acorns or pinecones, antlers, beetle imprints in bark, tunnels in snow, etc. Follow animal tracks in the snow
- Sing songs as you hike
- Actively wonder with the children
- Find a place to sit quietly, share a story or a book, use art supplies to draw what you see
- Bring a map to follow
- Count and measure things you see along the hike
- Use natural materials to create outdoor artwork

Things to keep in mind

There are many things to keep in mind when taking children outdoors. Keeping children safe is our top priority. There is a **need for a smaller teacher to child ratio when outside.** It is important to have at least two teachers with a group of children when in wild areas. At least one should be sufficiently trained in first aid and have knowledge of hazards that might be in the areas that children will be exploring. Safety can not be underestimated. Taking a backpack with a first aid kit and a cell phone or radio is important. Notifying school administrators of where you are is important, as well. Just as we know that play is how children learn, **allowing for exploration and unstructured time outdoors** enables children to learn from play. Doing a site assessment before children are outside allows teachers to **remove hazards, enabling children to assess their own risks safely.**

Teacher's Role

In addition to providing safe places for children to explore, teachers should act as facilitators, allowing the children to interact with the natural world on their own terms. Being flexible is also important, because you have to be willing to drop your planned activities to respond to the surprises that occur outdoors. If you have planned to search for colored leaves and the children find a woolly bear caterpillar under the leaves, the moment should change to a conversation about these special caterpillars. Why are they furry? Do they hibernate? Will they be a butterfly or moth when they emerge in the spring? Emergent curriculum happens daily when outdoors. Nature is ever-changing and can be unpredictable.

Overview of Nature Integration with *PreK for ME* Curriculum

For purposes of integrating with the *PreK for ME* curriculum, we have done our best to predict the seasonal happenings that typically occur in Maine and wherever possible connect them with the topics for each unit. The following chart outlines the different seasonal topics that would be most appropriate for each unit. Then each unit is summarized below the chart with more detail relating to each nature topic and how they fit into the unit. Because there are several seasonal topics that may fit a particular unit, but occur at a different time of year, these are mentioned as foreshadowing the unit topic or following up a unit topic that may have already occurred. These are listed as future unit previews and past unit follow up. Trees have a focus in each unit and the different classes of animals are included throughout the units with a focus on particular animals in each unit. Suggested focus for each unit:

Unit 1 – Animal class: Insects; Trees: Deciduous trees
Unit 2 – Animal class: Mammals; Trees: Conifers
Unit 3 – Animal class: Mammals; Trees: Dormant trees (winter tree ID)
Unit 4 – Animal class: Birds; Trees: Maple Sugaring
Unit 5 – Animal class: Birds; Trees: Flowering trees
Unit 6 – Animal class: Amphibians & Reptiles; Trees: Tree leaves

Unit # & Topic	**Unit 1: Family**	**Unit 2: Friends**	**Unit 3: Wind & Water**	**Unit 4: Worlds of Color**	**Unit 5: Shadows and Reflections**	**Unit 6: Things that Grow**
Time frame	Oct/ 1st wk of Nov	Nov/Dec	Jan/1st wk of Feb	Feb/March	April/1st part of May	May/June
Nature topics	Senses Insects Worms & slugs Bird migration (geese & ducks) Trees	Nature play Caring for animals Chipmunks & squirrels	Snow & ice Water cycle Animal dens Animal tracks & animals that stay active (rabbits)	Signs of spring Colors of nature Winter birds & owls	Sun/shadow (sun prints) Ponds (reflections)	Gardening Flowers Animal life cycles (frogs, butterflies, hatching chicks, macroinvertebrates) Tree leaves
Future unit previews	Autumn leaves, butterflies, apples & pumpkins	Seed dispersal (wind, things that grow)	Groundhog day (shadows)		Planting seeds inside, pond life, bird nests, wildflowers	

	(worlds of color)				(things that grow)	
Past unit follow up		Chipmunks & squirrels (families)		March winds (wind) Maple sugaring (water cycle)	April rains & ponds (water) Bird nests (families)	Macroinvertebrates (water)
Other seasonal happenings	Harvest	Animals preparing for winter Conifers	Hibernation Dormant trees		Flowering trees	

Unit Summaries

Unit 1 Family

A family is a group of people that care and support each other.

Nature connection – Animals that have similar characteristics are in the same family.

Time frame for nature topics – October through 1st week of November

Guiding ideas

- Animals (including people) learn through their senses
- Trees are plants that start as seeds and change throughout their lives. Observing trees throughout the year provides opportunities to sharpen observation skills, see how nature changes throughout the seasons, and better understand environmental concepts.
- Animal classification includes families of animals
- Fall is a time when animals migrate, leaves change color, plants are harvested, and insects are abundant.

Outdoor Learning components and concepts

- Exploring the senses
    - Infants discover the world through their senses and recognize their mothers by sight, smell, and the sound of their voice (connection to family topic)
    - Our senses include sight, sound, scent, touch, and taste
    - Brain research shows that all learning starts as a sensory input
    - When we engage more than one sense, we are more likely to remember our experience

    - The natural world provides the most numerous opportunities to engage the senses (especially multisensory experiences)
- Insects (and worms & slugs)
    - Insects are a class of arthropods (invertebrates) that include over 1500 families (connection to family topic)
    - There are more insects than any other kind of animal on earth
    - Insects are important for our natural ecology
    - Insects have three body parts, six legs, two antenna and some have wings (either two or four)
    - Insects develop in three or four stages called incomplete or complete metamorphosis
    - Spiders, pill bugs, worms, slugs, centipedes, etc are not insects, but live side-by-side with some of them
        - Slugs and worms play an important role in nature by eating decomposing vegetation
        - Worms and slugs live in soil and can be found under logs
        - Worms have no eyes, prefer damp dark soil, breathe through their skin, and are beneficial to gardens because they eat soil making tunnels that provide air to plant roots
        - Slugs help break down wood and other natural materials
        - Slugs glide on slime that they produce and can raise and contract the tentacles on their head (that are their eyes)
        - The difference between a slug and a snail is that a slug does not have a shell and a snail does
- Trees (autumn leaves)
    - Trees can be identified by their trunk size and their age compared to a family (connection to family topic)
        - baby trees: small diameter trunk where you can put your hand around it
        - brother and sister trees: medium sized diameter trunk where you can put your arms around it and touch your fingers
        - mom and dad trees: large diameter trunk where you can't touch your fingers when arms are around it
        - grandma and grandpa trees: extra large diameter trunk where you need several children to hold hands around the tree
    - Each tree has leaves of a specific shape, size and color
    - Leaves are green because of the chlorophyll in them
    - The chlorophyll (green) fades away as the weather gets colder and the days get shorter, then the true color of the leaf shows
    - Deciduous trees become dormant and drop their leaves as they prepare for winter
- Apples and pumpkins (harvest)

    - Many farmers grow apples and pumpkins and sell them at a Farmer's Market where families buy them (connection to family topic)
    - Apples and pumpkins are fruit filled with seeds
    - Apples grow on trees, pumpkins grow on vines on the ground
    - Harvest is the time when we pick apples, pumpkins, and some foods from our garden to share with our family (connection to family topic)
- Migration (geese & ducks, butterflies)
    - Animals need to migrate (move away) as winter approaches if they cannot find food where they are
    - Some birds, insects (monarch butterflies) and mammals migrate
    - Monarch butterflies adapt to changing weather by migrating from Canada to Mexico in the fall; in the spring the descendants of these Monarchs will begin the journey back north (connection to family topic)
    - Birds (geese and ducks) have an inner compass that helps them tell north from south.
    - Ducks and geese are in the same family (connection to family topic)

Unit 2: Friends

Friends may have conflicts that can cause complex feelings. Usually, friends work together to resolve problems.

Nature connection – We can be friends with the earth when we take care of animals and plants.

Time frame for nature topics – November/December

Guiding ideas

- Friendships can take place in families, in school between humans and animals, and in nature
- One special thing we can do is take time to show our love for nature
- Animals and plants prepare for winter in the fall in various ways
    - Trees lose their leaves
    - Squirrels and chipmunks collect food
    - Some birds, insects, and mammals migrate
    - Some insects and mammals hibernate
    - Some animals grow thicker fur
    - Some birds change what they eat
    - Many plants disperse their seeds

Outdoor learning components and concepts

- Nature play
    - Children can have fun outside with friends playing in the natural world discovering the animals and plants that live there

    - When they play with their friends outside they can work together to solve problems, build forts, and carry large logs or rocks
- Caring for animals
    - Children develop empathy by caring for animals in the classroom
    - Being a friend to the earth encourages an environmental ethic
- Chipmunks & squirrels
    - Chipmunks eat seeds, nuts, fruit, and forage on the ground
    - In the fall, chipmunks stockpile food in their underground burrow to prepare for winter
    - Eastern North American chipmunks hibernate, but are light sleepers and come out on a warm day in the wintertime
    - Squirrels climb trees, mostly eat seeds & nuts, have excellent vision, and live in nests (in trees) called drays
    - To prepare for winter, squirrels collect acorns and bury them
    - Squirrels stay active in the winter
    - Chipmunks and squirrels are in the same family
    - Chipmunks and squirrels are mammals (have fur, drink milk from their mothers, are born alive, are warm blooded)
- Seed Dispersal (preparing for winter)
    - Most plants make seeds from new plants and grow into the same kind of plant from which they came
    - In autumn, many plants stop growing and begin to die back: this is when they disperse their seeds and find a new location to grow well with enough sun and water so new plants can grow in the spring
    - Seeds disperse in various ways; some blow in the wind, some are sticky, some have spikes, some jump, and some are eaten
- Animals and plants prepare for winter
    - All animals and plants prepare for cold weather in different ways
    - Animals may migrate, hibernate, or stay active
    - Plants may go dormant and disperse their seeds
- Trees (Conifers/Evergreens)
    - Conifer trees, also known as evergreen trees, do not lose their leaves in the winter like deciduous trees do
    - Evergreen trees come in all shapes and sizes and their type of leaf are needles (spruce tree, pine trees, hemlock trees, fir trees) or scales (cedar trees).
    - Conifer trees produce cones of differing shapes and sizes and contain seeds that can be a useful food source for birds, squirrels, and other animals
    - Evergreen trees provide a warm place for animals in the winter

Unit 3: Wind and Water

Living things often depend on each other for shelter and protection.

Nature connection – all animals need food, water, shelter, and air to survive
Time frame for nature topics – January through the 1st week of February

Guiding ideas

- All animals need food, water, shelter, and air to survive
- Animals build dens to protect themselves from the wind and cold weather
- Animals that stay active in the winter can be identified by their footprints found in the snow
- Snow and ice are a part of the water cycle
- Deciduous trees are dormant in the winter, but provide shelter for animals

Outdoor learning components and concepts

- Snow & ice (water cycle)
    - Snowflakes can have six sides, but can look very different
    - Snow provides a blanket for many plants and animals
    - Water can take different forms, one of which is ice
    - Ice melts and changes shape due to heat, salt, and wind
- Animal tracks and animals that stay active (rabbits, deer, winter birds, squirrels)
    - Animals that are active in the winter leave tracks in the snow
    - Animals have different sizes of feet and different numbers of toes
    - Using the three P's of tracks (print – size, shape, number of toes; pattern – walking, bounding, waddling; placement – where the tracks are found), one can identify the animals that made the tracks
- Animal dens
    - Animals make dens or shelters to protect them from wind and cold weather
- Hibernation (Groundhog day)
    - Hibernation is a way some animals survive the winter cold
    - During hibernation, animals go into a deep sleep
    - Bears, groundhogs (woodchucks), frogs, turtles, snakes, bats, raccoons, chipmunks, and many insects hibernate during the winter. Some of these animals go into a deep sleep, while others wake up periodically on warmer days.
    - Groundhog day is February 2 and suggests that groundhogs wake up to see if winter is over. If they see their shadow they go back in their hole and sleep for six more weeks of winter. If they don't see their shadow then winter will be over soon. This is a whimsical non-scientific "holiday" that dates back centuries and is observed using different non-hibernating animals across the northern world to predict when winter will end. Groundhogs are deep sleepers and don't wake up in February.
- Trees (dormant)
    - Deciduous trees go dormant in the winter by dropping their leaves so they can conserve water because it turns to ice.

- Trees have different bark that can help to identify them in the winter
- Trees are used by animals for food and shelter
- Trees can be identified by their bark, buds, and type of branching (opposite vs. alternate)

Unit 4: The World of Color

Color can carry information that helps to organize systems.

Nature connection – Colors in nature change with the seasons

Time frame for nature topics – February/March

Guiding ideas

- Colors are found in nature and are important for survival
  - Some insects that are very colorful use this as a defense mechanism warning predators that they taste bad
  - Colorful flowers attract pollinators (insects and birds)
  - Male birds often have colorful feathers that attract females and also steer predators away from the camouflaged females and their nests
- As the weather warms during the day (but stays cold at night), tree sap starts to flow creating an opportunity to tap maple trees, collect sap, and make maple syrup
- Birds that don't migrate are active in the winter

Outdoor learning components and concepts

- Colors of nature
  - Colors are all around us. When we focus on individual colors we notice the details of the flora and fauna
  - Some animals (bees and butterflies) are especially attracted to colors and they see colors differently than we do
  - Colors of nature change with the seasons
  - Some insects have warning colors
  - Camouflage is an important defense mechanism for animals and plants
- Winter birds & owls
  - Some birds do not migrate and stay in Maine through the winter
  - Examples of winter birds are: Great-horned owl, Screech Owl, Barred Owl, Snowy Owl, Black Capped Chickadee, Northern Cardinal, Downy Woodpecker, Goldfinch, Tufted Titmouse, Blue Jay, White-breasted Nuthatch, Bald Eagle, Crow, Red-tailed Hawk, Mourning Dove
  - Birds have special adaptations that allow them to survive in the winter such as changing diet and the ability to stay warm
  - Owls are birds of prey; they hunt for their food and prefer small mammals, insects, fish, and small birds
  - Owls have serrated wings that help them to fly silently

    - Owls have large eyes to help them see in the dark, strong beaks, powerful talons, and are excellent at hiding because their feathers camouflage extremely well with their surroundings
    - Owls don't digest the bones and fur of the animals they eat, thus regurgitating them in the form of an owl pellet
    - Generally male birds have very colorful feathers to attract females
- Maple sugaring
    - Maple syrup is made from maple tree sap
    - Sap is a liquid inside a tree that contains sugar and maple tree sap has a higher percentage of sugar in it than other trees (about 3%)
    - As winter comes to an end and temperatures get above freezing during the day, the sap begins to move up the tree
    - Sap feeds the tree and helps it grow leaves
    - Maple trees have opposite branching
    - Maple syrup is made by heating maple sap until most of the water in the sap has evaporated away
    - Trees are an important resource for people
- March winds
    - Temperature changes in the spring cause the winds to blow more forcefully
    - March winds provide opportunities to fly kites
- Signs of spring
    - As the days get warmer in spring, the hibernating animals start to wake up and the migrating animals return from farther south
    - As spring arrives, the plants start to grow, and seeds start to sprout
    - Plants and animals begin a new season of growth and rebirth
    - Signs of spring can include various colors

Unit 5: Shadows and Reflections

Light affects people, animals, and things.

Nature connection – Animals and plants are affected by light

Time frame for nature topics – April through first part of May

Guiding ideas

- Seasonal changes of plants and animals are often triggered by changes in sunlight.
- As spring arrives wildflowers pop up, birds make nests, some trees start to flower, and ponds are teaming with life.

Outdoor learning components and concepts

- April rain/sun shadows
    - Sunlight makes shadows
    - Explore visual properties of opaque, transparent, and translucent objects

    - Explore properties of shadows and light
- Pond life (reflections)
    - Living creatures need water to live
    - Water takes different forms – ice, liquid, steam
    - Ponds are homes for many animals and plants
- Bird nests, feathers, eggs
    - Birds have feathers, wings, lay eggs, and are warm blooded
    - Birds have hollow bones which help them fly
    - Many birds make nests using various materials to do so
- Spring wildflowers (planting seeds)
    - There are many different kinds of wildflowers
    - They are ephemeral, sprouting up in the forests and soaking in the sunlight before the leaves come out on the trees
    - Wildflowers are very colorful attracting pollinators
- Flowering trees
    - Trees are an important resource for people
    - Trees flower in the spring often producing fruit such as apples and pears

Unit 6: Things that Grow

Living things are parts of interdependent systems.

Nature connection – Animals and plants have life cycles

Time frame for nature topics – May/June

Guiding ideas

- Studying the life cycles of animals and plants help children to understand the nature of living things.
- Gardening helps children understand where their food comes from.
- Tree buds begin to grow into leaves with chlorophyll so, along with sunlight, they can make food for the tree to grow.

Outdoor learning components and concepts

- Gardening
    - Vegetables and herbs are edible plants that grow from seeds
    - Plants need soil, sun, and rain to grow
    - We can grow our own plants by giving them space, keeping them watered, and pulling weeds around them
    - We can cook some of the things we grow into tasty snacks
    - We use plants for food
- Animal life cycles (frogs, butterflies, hatching chicks)
    - Amphibians live part of the time in water and part of the time on land and are cold blooded
    - The life cycle of amphibians and insects include changes called metamorphosis

    - Birds hatch from eggs
- Macroinvertebrates
    - We can use nets and other tools to explore ponds up close
    - We can read charts and guides to identify different pond creatures
    - Macroinvertebrates are small creatures that are often the larval stage of an insect
    - The types of macroinvertebrates found in a pond are predictors of the pond's water quality
- Tree leaves
    - As the weather warms and the sap goes up to the buds, leaves emerge and chlorophyll produces their green color.
    - Chlorophyll and sunlight produce food for the trees
- Flowers
    - Flowers are important in making seeds and fruit
    - Flowers are brightly colored and shaped to attract pollinators

Resources
Recommended children's books will be included in each unit

Materials to support lessons (Acorn Naturalist, Insect Lore)

- Hand lenses
- Identiflyer with bird and frog cards
- Animal track molds, stamps, charts, field guides
- Insect (butterfly) nets and containers
- Macroinvertebrate chart, guide, tubs, strainers, nets
- Audubon First Field Guides – Trees, Mammals, Birds, Insects, Wildflowers, Reptiles and Amphibians, Fish

Websites and books

- Natural Start Alliance – www.naturalstart.org
- Children and Nature Network – www.childrenandnature.org
- Insect Lore – www.insectlore.com
- Acorn Naturalist – www.acornnaturalist.com
- *Nature Preschools and Forest Kindergartens: The Handbook for Outdoor Learning* by David Sobel
- *Last Child in the Woods: Saving our Children from Nature Deficit Disorder* by Richard Louv
- *Inspiring Wonder, Awe, and Empathy: Spiritual Development in Young Children* by Deborah Schein
- *The Great Outdoors* by Mary Rivkin
- *Sharing Nature with Children* by Joseph Cornell – www.sharingnature.com

- *Growing up Wild* guide (from Project Wild)
- *Project Learning Tree* (early childhood guide)
- *Lens on Outdoor Learning* by Wendy Banning & Ginny Sullivan

Unit 1: Technology Supplement

Week One	Week Two	Week Three	Week Four
Technology Concepts: Digital tools help us to construct knowledge and create meaningful learning experiences	Technology Concepts: Computational Thinking introduced; Our responsibility as a good digital citizen introduced	Technology Concepts: Using digital technology for creative communication;	Technology Concepts: The concept of debugging is introduced; using digital tools to construct new knowledge

Unit 2: Technology Supplement

Week One	Week Two	Week Three	Week Four
Technology Concepts: Computational Thinking introduced through sequencing and algorithms: Digital tools help us to construct knowledge and create meaningful learning experiences	Technology Concepts: Digital tools provide a platform to be an active learner; Digital tools help us to construct knowledge and create meaningful learning experiences	Technology Concepts: Sequencing and Coding;	Technology Concepts: Our responsibility as a good digital citizen introduced; Using digital tools to construct knowledge; producing creative artifacts

Unit 3: Technology Supplement

Week One	Week Two	Week Three	Week Four
Technology Concepts: Computational Thinking introduced though coding; Constructing Knowledge through	Technology Concepts: digital technology used to pursue answers, communicate, present complex ideas, and publish	Technology Concepts: digital technology used to connect with others; digital citizenship; create original work; share ideas; organize	Technology Concepts: digital technology used to build knowledge; communicate complex ideas, examine an issue,

using digital tools; showing perseverance by working through problem solving	content	information and make connections to learning	and work towards a common goal.

Unit 4: Technology Supplement

Week One	Week Two	Week Three	Week Four
Technology Concepts: computation thinking through sequencing, debugging, and algorithms; digital tools used in design process and creative expression	Technology Concepts: technology leveraged to achieve competency, improve practice and learn in a variety of ways; digital tools used to remix original work, communicate through visualization, and digital literacy	Technology Concepts: digital tools used to construct meaningful learning experiences; technology leveraged for active role in learning goals	Technology Concepts: technology used to explore issues, develop ideas, and pursue answers; Computational Thinking introduced though coding; Constructing Knowledge through using digital tools; showing perseverance by working through problem solving

Unit 5: Technology Supplement

Week One	Week Two	Week Three	Week Four
Technology Concepts: technology used to seek feedback for learning; digital tools used to build knowledge, develop theories, and pursue solutions; digital citizenship; digital tools used for research strategies;	Technology Concepts: digital tool used to create original work; technology used to demonstrate learning in a variety of ways; digital identity awareness developed; content customized and	Technology Concepts: original works created using digital platform; content customized and published for intended audience; digital literacy	Technology Concepts: digital to used to construct knowledge and make meaningful learning experiences

evaluate quality and relevance of information	published for intended audience		

Unit 6: Technology Supplement

Week One	Week Two	Week Three	Week Four
Technology Concepts: right and obligations of using digital technology, creative artifacts created, problem solving, original work created and published to intended audience; digital tools used to create artifacts and demonstrate meaningful connections	Technology Concepts: digital technology used to seek feedback; creative information created; knowledge built by exploring ideas and pursuing answers and solutions; Computational Thinking introduced though coding; Constructing Knowledge through using digital tools; showing perseverance by working through problem solving	Technology Concepts: Computational Thinking introduced through sequencing and algorithms; digital tool used to construct new knowledge and make new connections to learning	Technology Concepts: technology used in design process; perseverance present; digital tools used to find information

Pre-K for Me Technology Supplement Statement

The foundation of early childhood education is Developmentally Appropriate Practice (DAP), a concept that brings together knowledge of child development, the development of the individual child, and the culture of the child (Copple & Bredekamp, 2009). The importance of using DAP for digital technology in an early childhood classroom is no different than when using other types of materials and tools (Fred Rogers Center, 2012). The Fred Rogers Center (2012) provides two principles for digital media use: a) "quality digital media should safeguard the health, well-being, and overall development of young children, and b) quality in digital media for young children should take into account the child, the content and the context of use" (p. 6). These principles support DAP through intentional use of technology in the classroom. NAEYC (2012) provides guidelines on linking DAP with technology as ways to differentiate curriculum, communicate with families, and enhance cognitive and social abilities in play-based environments. The American Academy of Pediatrics (AAP) released new guidelines for screen time that emphasize the importance of adults working with children in researching the apps used, understanding and co-engaging in digital content.

The International Society for Technology in Education (ISTE) technology standards for students begins at age four. The 2016 ISTE Standards for Pre-K-12 students emphasizes fitting technology into pedagogy rather than focusing on the technology as a tool (ISTE-S, 2016). The ISTE Student Standards (2016) and the NAEYC Technology Statement (2012) share an emphasis on appropriate pedagogy, collaboration, and understanding technology use. ISTE-S provides a framework for developing intentional and appropriate classroom interactions with digital technology for young children. Foundations are built for young children to become *Technology*

Literate Students (ISTE, 2016) in the areas of active learning, and social outcomes through communication and collaboration. As digital technology becomes more prevalent in education settings, early education teachers need to focus on introducing and extending technology in preparation for the child to become a Technology Literate Student.

Using the Technology Supplement in Pre-K for ME

Technology in early childhood classrooms needs to emphasize interaction – whether that is between the child and teacher or a collaboration of children using a tech tool. Teachers should become familiar and comfortable with the technology before introducing it into the classroom. This technology supplement does not support using digital technology as a passive means of engagement nor does it suggest using technology as a "reward".

The activities found in the technology supplement are interactive, and enhance existing activities within each unit. The tech tools and activities are accessible, recognizing the wide range of comfort early childhood teachers have using technology. Two activities are available for each of the first four weeks in each unit: one activity is designed for easy access and "lower" level commitment; the second activity is designed for a "higher" level of teacher commitment and activity. The activities are designed so that they offer maximum flexibility for early childhood classrooms. There is a Unit Guide that provides the technology concepts presented by unit and week.

When you look over the apps and other resources used in the technology supplement, you will notice that there are multiple apps and other material that can be used to write books, journals, and draw. Each tech supplement lesson suggests apps/tools for you to use - if you are new to technology, start with the tools/apps you most familiar. As you become more

comfortable integrating tech tools, you can experiment with more complex technology. The technology supplement activities are suggestions - as you become more familiar with the lessons and technology, you may find yourself developing your own technology extensions.

Both ISTE for Students and MELDS are found in each activity. ISTE for Students are the technology standards used in Pre-K-12 curriculum and are therefore an important part of the PreK-12 continuum. ISTE for Students might be unfamiliar to many of the Pre-K for ME users, so links to the standards are provided. Use this technology supplement as it fits into your program and teaching - and have fun exploring the appropriate use of interactive technology!

Practicing digital citizenship as a teacher before taking pictures of children and their work (Erikson, n.d.)

- talk to your school leadership first about your plans
- ask parents/guardians to sign a release form provided by the school or program
- ask each child for permission and tell children how their images will be used
- *protect a child's privacy* and digital footprint by putting a shape or positive emoji over a child's face before sharing it on social media platforms to protect a child's privacy
- Before sharing images of children with parents and caregivers make sure to review guidelines for protecting their privacy with parents, including reminding parents to
    - *ask for permission from* your child if you can post an image, video or project online and respect your child's wishes

- share with care and post images of *only your child* online
- *be positive and a good digital citizen* by posting only positive comments, photos and videos a child would be proud to show someone later in life-never shame your own child or another child online

References

Copple, C., & Bredekamp, S. (Eds.) (2009). *Developmentally appropriate practice* (3rd Edition). Washington, DC: NAEYC

Erikson Institute. (n.d.). Retrieved from http://teccenter.erikson.edu/.

International Society for Technology in Education. (2016). *ISTE Standards – Students.* Retrieved from http://www.iste.org/standards/standards/standards-for-students

National Association for the Education of Young Children & Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College. (2012). *Technology and Interactive media as tools in early childhood programs serving children from birth through age 8*. Retrieved from http://www.naeyc.org/content/technology-and-young-children

Technology Supplement Resources

This is a list of tech tools and resources to aid you in bringing developmentally appropriate technology into your early learner classroom.

#TECTips: Early Childhood Lesson Planning with Tech Integration
This webpage provides questions to ask before integrating technology into your lessons

BookCreator App
This app is exactly what the name implies - it create digital books.

Classroom DoJo
Social Media for the Classroom

Digital Microscope

Draw and Tell HD App

Educreation App
This app is designed to engage students through visual creations

Epic! Books
This website is a free e-book library

E Bird - Cornell Lab

Erikson Tec Center
Check out this website for excellent teacher education resources

Fred Rogers Center
This website provides early childhood professionals with information on how to integrate appropriate technology into the classroom

Google Earth App

Google Expeditions App
Google Expedition takes you on virtual tours all over the world

Joan Ganz Cooney Center
This website offers a wide range of digital learning supports for teachers, young children, and their families

Sphero Mini

This video explains setting up the Sphero Mini and provides a quick tutorial on how to use the Sphero Mini
Any Sphero can be used in the activities. The Sphero Mini was selected for the technology lessons based on affordability.

NAEYC and Fred Rogers Center Technology Statement

NAEYC Resource on Coding Stories and Games

NAEYC Technology Resources

National Audubon Society Website
This website offers a wealth of information about the natural world

National Geographic for Kids Website

Osmo Creative Kit (includes Masterpiece and Monster hardware)
Osmo can be used with an iPad or Kindle Fire

Osmo Masterpiece App
Osmo can be used with an iPad or Kindle Fire

Osmo Monster App
Osmo can be used with an iPad or Kindle Fire

PBS Learning Media online resources

Puppet Edu app: This app is a video slide-show maker with narration

See Saw
Social Media for the Classroom

Smithsonian Institute

Smithsonian Natural History Museum Virtual Tours

Toying with Tech: Early Coding
This blog post from the Erikson Tec Center provides information on teaching young children pre-coding and computational thinking skills

Maine Early Learning and Development Standards
MELDS

The following communicates the MELDS as well as the shorthand codes. Each lesson includes these standards.

Standards for Social & Emotional Development
Emotional Development
Emotional Development- Self Concept *MELDS.SED.ED.SC.PS.1* Has an awareness of self as having certain abilities, characteristics, preferences and rights *MELDS.SED.ED.SC.PS.2* Demonstrates self-direction by making choices among peers, activities and materials *MELDS.SED.ED.SC.PS.3* Takes on new tasks and improves skills with practice *MELDS.SED.ED.SC.PS.4* Initiates actions or activities with peers *MELDS.SED.ED.SC.PS.5* Expresses delight over a successful project and want others to like it too *MELDS.SED.ED.SC.PS.6* Demonstrates confidence in own abilities and delights in the mastery of a skill *MELDS.SED.ED.SC.PS.7* Demonstrates an understanding of and follows through with basic responsibilities **Emotional Development- Self-Regulation** *MELDS.SED.ED.SR.PS.1* Expresses self in safe and appropriate ways through words and actions

MELDS.SED.ED.SR.PS.2
Seeks peaceful resolutions to conflict

MELDS.SED.ED.SR.PS.3
Stops and listens to instructions before jumping into activity, with guidance

MELDS.SED.ED.SR.PS.4
Follows rules and routines

MELDS.SED.ED.SR.PS.5
Respects the rights and property of others

MELDS.SED.ED.SR.PS.6
Uses materials appropriately

MELDS.SED.ED.SR.PS.7
Is able to share materials or caregiver's/teacher's attention

MELDS.SED.ED.SR.PS.8
Can wait for turn in simple game or use of equipment

MELDS.SED.ED.SR.PS.9
Accepts consequences of own actions

MELDS.SED.ED.SR.PS.10
Regulates own emotions and behaviors

MELDS.SED.ED.SR.PS.11
Refrains from disruptive, aggressive, angry or defiant behaviors

MELDS.SED.ED.SR.PS.12
Asks what and why questions to understand effects of behavior

Emotional Development- Sympathy and Empathy

MELDS.SED.ED.SE.PS.1
Expresses empathy for others

MELDS.SED.ED.SE.PS.2
Comforts physically hurt or emotionally upset child through appropriate words or actions

MELDS.SED.ED.SE.PS.3
Labels own emotions and, increasingly, the emotions of others

MELDS.SED.ED.SE.PS.4
Demonstrates understanding of the consequences of own actions on others

MELDS.SED.ED.SE.PS.5
Understands the reasons for rules and routines within the group and accepts them

MELDS.SED.ED.SE.PS.6
Asks "what" and "why" questions to understand effects of behavior

MELDS.SED.ED.SE.PS.7
Shows progress in expressing feelings, needs, and opinions, in difficult situations and conflicts, without harming self, others, or property

Emotional Development- Adapting to Diverse Settings
MELDS.SED.ED.ADS.PS.1
Demonstrates ability to be flexible or adjust to routine or unexpected changes including physical setting, daily schedule, staffing and group size/ attendance

MELDS.SED.ED.ADS.PS.2
Adjusts to transitions from one activity setting to the next during the day with appropriate emotions and behaviors

MELDS.SED.ED.ADS.PS.3
Anticipates with assistance what will be needed in diverse settings

MELDS.SED.ED.ADS.PS.4
Follows rules in diverse settings

Social Development

Social Development- Building Relationships with Children
MELDS.SED.SD.BRC.PS.1

Participates cooperatively in large and small group activities

MELDS.SED.SD.BRC.PS.2
Participates in classroom and group routines

MELDS.SED.SD.BRC.PS.3
Uses different turn-taking strategies

MELDS.SED.SD.BRC.PS.4
Shows increasing abilities to use compromise and discussion in play, and resolution of conflicts with peers

MELDS.SED.SD.BRC.PS.5
Develops consideration for the needs or interests of peers

MELDS.SED.SD.BRC.PS.6
Develops friendships with peers

MELDS.SED.SD.BRC.PS.7
Notices and comments on who is absent from routine group settings

MELDS.SED.SD.BRC.PS.8
Shows concern for personal fairness within a peer group

MELDS.SED.SD.BRC.PS.9
Defends own rights and the rights of others

MELDS.SED.SD.BRC.PS.10
Gives social support to others

MELDS.SED.SD.BRC.PS.10
Demonstrates knowledge that fairness involves a recognition that respects the needs of individuals as well as sharing and turn-taking

MELDS.SED.SD.BRC.PS.12
Identifies and expresses self a part of several groups (e.g. family, preschool class, faith community, etc.)

MELDS.SED.SD.BRC.PS.13
Uses play to explore, practice and understand social roles

MELDS.SED.SD.BRC.PS.14
Joins in the middle of an on-going group activity with friends independently

MELDS.SED.SD.BRC.PS.15
Invents and sets up activities that include more than one child

MELDS.SED.SD.BRC.PS.16
Gives social support to others

Social Development- Respecting Similarities and Differences
MELDS.SED.SD.RSD.PS.1
Names and accepts differences and similarities in preferences

MELDS.SED.SD.RSD.PS.2
Notices that other children might communicate differently or use different words for the same object

MELDS.SED.SD.RSD.PS.3
Begins to examine a situation from others' perspective

MELDS.SED.SD.RSD.PS.4
Shows concern about personal fairness within a peer group

Standards for Approaching Learning
Innovative & Curiosity
MELDS.ATL.IC.PS.1 Initiates participation in a widening ranges of topics, ideas, and tasks *MELDS.ATL.IC.PS.2* Invents projects and works on them with little assistance *MELDS.ATL.IC.PS.3* Wonders and asks questions about change in his/her world *MELDS.ATL.IC.PS.4* Uses “wh” questions to get information a variety of topics (why, who, what, where and when) *MELDS.ATL.IC.PS.5* Approaches tasks and activities with increasing flexibility, imagination, and inventiveness *MELDS.ATL.IC.PS.6* Invents games and new activities
Engagement & Persistence
MELDS.ATL.EP.PS.1 Persists in and completes an increasing variety of tasks, activities, projects, and experiences despite frustrations *MELDS.ATL.EP.PS.2* Demonstrates resiliency and coping skills when faced with challenges (i.e. concentrates despite distractions and/ or increasingly manages own level of frustration) *MELDS.ATL.EP.PS.3* Chooses to leave a project and returns to it later for completion or elaboration *MELDS.ATL.EP.PS.4* Sets goals, develops plans, and completes tasks with increasing independence *MELDS.ATL.EP.PS.5* Maintains concentration despite distractions
Reflection & Problem Solving
MELDS.ATL.RPS.PS.1 Predicts when something might be a problem or challenge

MELDS.ATL.RPS.PS.2
Makes predictions about what will happen next

MELDS.ATL.RPS.PS.3
Looks for more than one solution to a question, task, or problem

MELDS.ATL.RPS.PS.4
Applies prior experiences, senses, and knowledge to new learning situations

MELDS.ATL.RPS.PS.5
Considers and implements different approaches to carrying out a task

MELDS.ATL.RPS.PS.6
Independently alters approach to tasks when initial approach does not work

MELDS.ATL.RPS.PS.7
Discusses or documents important aspects of an experience and identifies what was learned

MELDS.ATL.RPS.PS.8
Solves increasingly complex problems and an increased number of problems

Standards for Creative Arts
Visual Arts
MELDS.CA.VA.PS.1 Shows interest in different art media and materials in a variety of ways for creative expression and representation *MELDS.CA.VA.PS.2* Works collaboratively to create group art displays *MELDS.CA.VA.PS.3* Progresses in abilities to create drawings, paintings and other art creations that reflect more detail, uniqueness, and/or realism *MELDS.CA.VA.PS.4* Uses art materials safely and appropriately *MELDS.CA.VA.PS.5* Selects and describes the elements of personal artwork with teachers, other children and parents
Movement & Dance
MELDS.CA.MD.PS.1 Moves in response to tempo changes and different styles of music *MELDS.CA.MD.PS.2* Uses creative movement, planned or improvised, that expresses an idea or feeling *MELDS.CA.MD.PS.4* Listens and cooperates in group creative movement/dances
Music
MELDS.CA.M.PS.1 Shows increasing ability to recognize tempo changes and different styles of music *MELDS.CA.M.PS.2* Sings songs with more complex and varied lyrics, patterns and notations *MELDS.CA.M.PS.3* Uses music and instruments to imitate and improvise songs, melodies, and patterns
Dramatic Play & Performance

MELDS.CA.DE.PS.1

Uses objects for other than their intended purpose to create representations of real life objects or activities

MELDS.CA.DE.PS.2
Represents fantasy and real life experiences through pretend play and use of props and costumes

MELDS.CA.DE.PS.3
Uses pretend play to represent known or anticipated situations
Performance
MELDS.CA.DP.PS.1
Creates characters through physical movement, gesture, sound, speech and facial expressions

MELDS.CA.DP.PS.2
Recreates dramatic play experiences, stories or poems for an audience

Standards for Early Language & Literacy
Speaking & Listening
Comprehension & Collaboration *MELDS.ELA.SL.CC.PS.1* Increases ability to engage in collaborative conversations about preschool topics and texts with peers and adults in small & larger groups: • *MELDS.ELA.SL.CC.PS.1.a* Follows agreed-upon rules for discussions (e.g., listening to other & taking turn speaking about the topics & texts under discussion) • *MELDS.ELA.SL.CC.PS.1.b* Engages in conversations with multiple exchanges *MELDS.ELA.SL.CC.PS.2* Confirms understanding of a text read aloud or information presented orally or through other media by asking and answering questions *MELDS.ELA.SL.CC.PS.3* Asks questions in order to seek help, get information, or clarify something that is not understood **Presentation of Knowledge & Ideas** *MELDS.ELA.SL.PKI.PS.1* Describes familiar people, places, things, and events, and, with prompting and support, begins to provide additional detail *MELDS.ELA.SL.PKI.PS.2* Begins to add drawing or other visual displays to descriptions to provide additional detail *MELDS.ELA.SL.PKI.PS.3* Speaks audibly most of the time and expresses thoughts, feelings, and ideas
Language
Conventions of Standard English *MELDS.ELA.LS.CSE.PS.1* Begins to demonstrate understanding of the conventions of standard English grammar and usage when writing or speaking: • *MELDS.ELA.LS.CSE.PS.1.a* Prints some upper- and lowercase letters, and can write own name • *MELDS.ELA.LS.CSE.PS.1.b* Uses frequently occurring nouns and verbs

- *MELDS.ELA.LS.CSE.PS.1.c*
  Begins to form regular plural nouns orally by adding /s/ or /es/ (e.g. dog, dogs; wish, wishes)
- *MELDS.ELA.LS.CSE.PS.1.d*
  Responds to and uses more question words (interrogatives, e.g. who, what, where, when, why, how)
- *MELDS.ELA.LS.CSE.PS.1.e*
  Begins to use the most frequently occurring prepositions (e.g. to, from, in, out, on, off, for, of, by, with)
- *MELDS.ELA.LS.CSE.PS.1.f*
  Demonstrates the ability to speak in complete sentences

MELDS.ELA.LS.CSE.PS.2
Begins to use standard English capitalization, punctuation, and spelling when writing:
- *MELDS.ELA.LS.CSE.PS.2.a*
  Capitalizes the first letter in own name
- *MELDS.ELA.LS.CSE.PS.2.b*
  Begins to recognize punctuation (e.g., ., ?, !)
- *MELDS.ELA.LS.CSE.PS.2.c*
  Begins to write letters to represent sounds
- *MELDS.ELA.LS.CSE.PS.2.d*

Vocabulary Acquisition & Use
MELDS.ELA.LS.VAU.PS.1
Asks & answers questions about the meanings of new words and phrases introduced through books, activities and play:
- *MELDS.ELA.LS.VAU.PS.1.a*
  With prompting and support, generates words that are similar in meaning (e.g. happy/glad, angry/mad)

MELDS.ELA.LS.VAU.PS.2
Explores word relationships and meanings:
- *MELDS.ELA.LS.VAU.PS.2.a*
  Sorts common objects into categories (e.g. big/small, living/nonliving)
- *MELDS.ELA.LS.VAU.PS.2.b*
  Applies words learned in classroom activities to real-life examples (e.g., names places in school that are fun,
  quiet,or noisy)
- *MELDS.ELA.LS.VAU.PS.2.c*
  Begins to distinguish shades of meaning among verbs describing the same general action by acting out the
  meanings

MELDS.ELA.LS.VAU.PS.3
Uses words and phrases acquired through conversations, listening to books read aloud, activities, and play

Reading Standards for Literature

Key Ideas & Details
With prompting and support:
MELDS.ELA.RL.KID.PS.1
Asks and answers questions about simple stories

MELDS.ELA.RL.KID.PS.2
Retells at least one major event from a simple story

MELDS.ELA.RL.KID.PS.3
Identifies main characters in simple stories

Craft & Structure
MELDS.ELA.RL.CS.PS.1
Asks questions about unknown words and phrases in stories

MELDS.ELA.RL.CS.PS.2
Begins to recognize that there are different text structures, such as stories, poems, and songs

MELDS.ELA.RL.CS.PS.3
Begins to describe the roles of authors & illustrators

Integration of Knowledge & Ideas
MELDS.ELA.RL.IKI.PS.1
Retells stories using both storybook language and pictures

MELDS.ELA.RL.CS.PS.2
Begins to make connections between characters in familiar stories

Reading & Level of Text Complexity
MELDS.ELA.RL.LTC.PS.1
Participates in (individually and in groups) a variety of age-appropriate print materials

Reading Standards for Informational Text

Details-Informational Text
With prompting and support:

MELDS.ELA.IT.D.PS.1
Asks and answers questions about an informational text read aloud

MELDS.ELA.IT.D.PS.2
Recalls important facts from an informational text after hearing it read aloud or studying particular pages/visuals

MELDS.ELA.IT.D.PS.3
Represents or acts out concepts learned from hearing an informational text read aloud (e.g. makes a skyscraper out of blocks at the sensory table)

Structure-Informational Text
MELDS.ELA.IT.S.PS.1
Asks questions about unknown words and phrases in informational texts read aloud or shared visually

MELDS.ELA.IT.S.PS.2
Identifies front cover and back cover of a book and title

MELDS.ELA.IT.S.PS.3
Begins to describe the role of authors and illustrators

Integration of Knowledge Ideas
MELDS.ELA.IT.I.PS.1
Describes important information from text and pictures/photos/graphics

MELDS.ELA.IT.I.PS.2
Recognizes that information on a topic can be found in more than one text

Range of Reading Level of Text Complexity
MELDS.ELA.IT.LTC.PS.1
Participates individually and in groups in a variety of age-appropriate informational text materials

Reading Skills: Foundational Skills

Print Concepts
MELDS.ELA.RF.PC.PS.1
Displays appropriate book-handling skills and knowledge of print conventions:

- *MELDS.ELA.RF.PC.PS.1.a*
  Begins to track print from left to right and top to bottom
- *MELDS.ELA.RF.PC.PS.1.b*
  Recognizes that print is something that is read and has specific meaning
- *MELDS.ELA.RF.PC.PS.1.c*
  Begins to demonstrate that words are separated by spaces in print

- *MELDS.ELA.RF.PC.PS.1.d*
  Recognizes and names at least 15-20 upper and 15-20 lower case letters.

Phonological Awareness
With prompting and support:
MELDS.ELA.RF.PA.PS.1
Demonstrates understanding of spoken words, syllables, and some beginning sounds (phonemes):
- *MELDS.ELA.RF.PA.PS.1.a*
  Recognizes and produces rhyming words
- *MELDS.ELA.RF.PA.PS.1.b*
  Counts, pronounces, blends, and segments syllables in spoken words
- *MELDS.ELA.RF.PA.PS.1.c*
  Blends and segments onsets and rimes of single-syllable words
- *MELDS.ELA.RF.PA.PS.1.d*
  Isolates and pronounces the initial and final sounds (phonemes) in single syllable words and their name
- *MELDS.ELA.RF.PA.PS.1.e*
  Begins to add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words

Phonics & Word Recognition
With prompting and support, applies beginning phonics and word analysis skills:
- *MELDS.ELA.RF.PWR.PS.1*
  Links a sound to a picture of an object that begins with that sound.
- *MELDS.ELA.RF.PA.PS.2*
  Begins to link a sound to the corresponding printed letter
- *MELDS.ELA.RF.PA.PS.3*
  Recognizes names of other children in the classroom and common print around the classroom.

Fluency
MELDS.ELA.RF.F.PS.1
Attends to fluent models of reading

MELDS.ELA.RF.F.PS.2
Imitates fluent models of reading

Writing Standards

Text Types and Purposes of Writing

With prompting and support, uses a combination of drawing, dictating and writing to:

• MELDS.ELA.W.TTP.PS.1
Communicate opinions on topics of interest (e.g., My favorite food is…)

• MELDS.ELA.W.TTP.PS.2
Communicate information about a topic

• MELDS.ELA.W.TTP.PS.3
Tell a story

Production & Distribution of Writing

With prompting and support:

MELDS.ELA.W.PD.PS.1
Shares drawing and writing with peers to gather additional ideas and/or answer questions

MELDS.ELA.W.PD.PS.2
Recognizes that digital tools are used for communication and, with support and guidance uses them to convey messages in picture and/or words

Research to Build & Present Knowledge-Writing

MELDS.ELA.W.R.PS.1
Participates in shared research and writing projects modeled by adults (e.g. class explores how tadpoles become frogs and create visuals)

MELDS.ELA.W.R.PS.2
With guidance and support, begins to recall information from experiences or gather information from different sources

Standards for Physical Development & Health
Nutrition

MELDS.PHD.N.PS.1
Recognizes, chooses and eats a variety of healthy foods from various cultures

MELDS.PHD.N.PS.2
Identifies foods by their food group and where the food comes from, and knows the difference between healthful foods and those with little nutritional value

MELDS.PHD.N.PS.3
Shows a growing awareness of nutrition and independence in hygiene, nutrition and personal care when eating

Safety

MELDS.PHD.S.PS.1
Identifies how people help keep them safe in dangerous situations

MELDS.PHD.S.PS.2
Can identify a stranger

MELDS.PHD.S.PS.3
Follows basic safety rules and practices

MELDS.PHD.S.PS.4
Responds appropriately to harmful or unsafe situations, objects, substances and environments, and can identify the consequences of unsafe behavior

MELDS.PHD.S.PS.5
Demonstrates safety awareness and responsibility when using materials

MELDS.PHD.S.PS.6
Uses caution and keeps a distance from wildlife and unknown pets

MELDS.PHD.S.PS.7
Follows emergency routines after adult instruction

Fine Motor

MELDS.PHD.FM.PS.1
Holds drawing, writing and painting tools by using a three-point finger grip, writing more detail, and drawing more recognizable facial features

MELDS.PHD.FM.PS.2
Continues to progress with use of utensils with limited spilling, using fork, and using knife for cutting

MELDS.PHD.FM.PS.3
Demonstrates increased skills in using scissor grip to cut shapes or simple pictures while holding paper stationary with other hand

MELDS.PHD.FM.PS.4
Practices manual self- help skills, including dressing self and attempting to tie shoes

MELDS.PHD.FM.PS.5
Uses small, precise finger and hand movements

MELDS.PHD.FM.PS.6
Uses fingers, hands and wrists to manipulate a variety of small tools (e.g., stapler, hole punchers, spray bottles)

Gross Motor

MELDS.PHD.GM.PS.6
Manipulates balls or similar objects with a full range of motion

MELDS.PHD.GM.PS.7
Develops coordination and balance with a variety of playground equipment

MELDS.PHD.GM.PS.8
Enjoys challenging him/herself to try new and increasingly difficult activities

MELDS.PHD.GM.PS.9
Shows enthusiasm for mastery of gross motor movements through repetitive practice

Health Knowledge & Practice

MELDS.PHD.HKP.PS.7
Moves with an awareness of others

MELDS.PHD.HKP.PS.8
Demonstrates the increasing ability to perform self-care skills independently when eating, tooth brushing, dressing, toileting, grooming

MELDS.PHD.HKP.PS.9
Participates easily and knows what to do in routine activities

MELDS.PHD.HKP.PS.10
Covers mouth when coughing

MELDS.PHD.HKP.PS.11
Helps with routine care of the environment

MELDS.PHD.HKP.PS.12
Recognizes there are multiple components of health

MELDS.PHD.HKP.PS.13
Identifies physical changes that accompany moderate to vigorous physical activity

MELDS.PHD.HKP.PS.14
Participates in sleep routines

Math
Math
Mathematical Practices

MELDS.M.MP.PS.1
Approaches math with enthusiasm

MELDS.M.MP.PS.2
Associates math with engaging classroom materials and activities

MELDS.M.MP.PS.3
Recognizes the usefulness of math in everyday tasks

MELDS.M.MP.PS.4
Uses math to solve problems in the context of classroom and home experiences

MELDS.M.MP.PS.5
Represents mathematical concepts using manipulatives

MELDS.M.MP.PS.6
Uses math-related skills, such as sorting, counting, and matching in the course of everyday classroom experiences

MELDS.M.MP.PS.7
Uses math terms in the course of everyday conversations

Counting and Cardinality Cluster
MELDS.M.CCC.PS.1
Rote counts to 20 and beyond by ones with increasing accuracy

MELDS.M.CCC.PS.2
Recognizes and names written numerals 0 -10

MELDS.M.CCC.PS.3
Subitizes to determine how many (recognizes small quantities immediately)

MELDS.M.CCC.PS.4
Recognizes the relationship between numbers and quantities: connect counting to cardinality (0-10)

MELDS.M.CCC.PS.5
Shows understanding that the last number name spoken tells the number of objects counted up to 10 (cardinality)

MELDS.M.CCC.PS.6
Shows understanding that the number of objects is the same regardless of their arrangement or the order in which they were counted

MELDS.M.CCC.PS.7
Begins to write number symbols 0-10

MELDS.M.CCC.PS.8
Identifies whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group up to 10

Operations and Algebraic Thinking
MELDS.M.OAT.PS.1
Associates quantity with a number name or written numeral

MELDS.M.OAT.PS.2
Counts using 1:1 correspondence with increasing accuracy

MELDS.M.OAT.PS.3
Represents addition and subtraction with fingers, drawing, acting out situations and verbal explanation

MELDS.M.OAT.PS.4
Uses concrete objects to model real-world addition and subtraction up to 5 (composing and decomposing numbers)

MELDS.M.OAT.PS.5
Acts out and solves story problems using sets of up to ten objects

Geometry

Geometry
MELDS.M.G.PS.1
Describes, sorts and classifies shapes using some attributes such as size, sides, and other properties

MELDS.M.G.PS.2
Discovers connections between formal geometric shapes and the surrounding environment

MELDS.M.G.PS.3
Combines materials to make three-dimensional and two-dimensional shapes

MELDS.M.G.PS.4
Breaks down shapes into parts and wholes

MELDS.M.G.PS.5
Initiates activities that indicate understanding of directionality

MELDS.M.G.PS.6

Uses orientation and directionality words such as slides, flips and turns as shapes are manipulated

MELDS.M.G.PS.7
Uses symbols and/or objects to indicate beginning understanding of relative positions in space (i.e. creates simple maps; follows directions during nature walks)

MELDS.M.G.PS.8
Demonstrates or describes relative positions of objects, using words such as up, down, beside, over

Measurement and Data
MELDS.M.MD.PS.1
Describes, sorts and classifies groups of objects using one or more attribute

MELDS.M.MD.PS.2
Identifies and compares measurable attributes of everyday objects, using appropriate vocabulary (e.g., long, short, tall, heavy, light, big, small, full, empty)

MELDS.M.MD.PS.3
Begins to identify such words as “first”, “next”, and “last

MELDS.M.MD.PS.4
Uses discrete attributes to order and seriate materials

MELDS.M.MD.PS.5
Recognizes, duplicates, creates, and extends simple patterns using objects

MELDS.M.MD.PS.6
Uses past and future tenses and time words appropriately

MELDS.M.MD.PS.7
Begins to understand concepts such as yesterday, today, and tomorrow

MELDS.M.MD.PS.8
Responds to questions that can be answered through data analysis

MELDS.M.MD.PS.9
Represents data using simple charts and graphs (2-D or 3-D)

MELDS.M.MD.PS.10
Uses non-standard units of measurement to measure objects; notices similarities and differences

MELDS.M.MD.PS.11 Connects measurement terms and concepts in everyday life

Science
Physical Science
MELDS.S.PS.PS.1

Uses senses, tools (including technology) to observe, describe, discuss and attempt to explain the effects of different strengths or different directions of pushes and pulls on the object

MELDS.S.PS.PS.2
Plans and carries out, with teacher support, comparisons of motion and force using common objects and materials (e.g., which objects move faster or slower, which object goes faster or further when you just let go or give it a push)

MELDS.S.PS.PS.3
Records results of observations, with teacher support, using simple drawings, discussions, charts, photos or models and reflects on what was learned

MELDS.S.PS.PS.4
Uses knowledge and skills learned through observation and exploration to create new and improved objects or processes (e.g., changes the surface material of a ramp or put bigger wheels on a car to make a difference in speed

MELDS.S.PS.PS.5
Listens to stories, poems, and finger plays about physical knowledge and uses vocabulary about speed, motion and stability in daily conversations

MELDS.S.PS.PS.6
Constructs a system of tubes and/or ramps for a marble to travel through; and discovers that steeper ramps will cause a marble to travel faster

Earth Science

MELDS.S.ES.PS.1
Uses senses and tools (including technology) to observe, describe, discuss and generate questions about changes in weather over time (e,g., why ice melts faster in the sun than in the woods, why puddles evaporate in the sun but remain longer in the shade, why metal gets hot on a sunny day but not a rainy one)

MELDS.S.ES.PS.2
Plans and carries out simple experiments about water and heat (turning water to ice when brought outdoors in winter or mud turning to dirt in the sun) and records observations using drawings, discussions, graphs and technology

MELDS.S.ES.PS.3
Asks questions and investigates the ways that weather can affect things that can be done outside

MELDS.S.ES.PS.4
Uses knowledge and skills learned through observation of the earth and sun to create new and improved objects or processes (e.g. creating shade on a hot day or changing the path of

water away from the playground after rain)

MELDS.S.ES.PS.5
Demonstrates, through observation and investigation, an understanding that human action impacts the earth (i.e., use of resources and recycling, the process from cutting trees to recycling paper)

MELDS.S.ES.PS.6
Demonstrates an understanding of how weather forecasts are used to select appropriate garments to wear or bring along when leaving home

MELDS.S.ES.PS.7
Develops a sense of dangerous/severe weather in Maine

Life Science

MELDS.S.LS.PS.1
Uses senses to observe and describe properties of familiar plants and animals

MELDS.S.LS.PS.2
Uses vocabulary for naming plants and animals moving beyond generic labels (e.g. "bug") to names of specific creatures (e.g. "ant", "beetle") and use symbols or icons to identify where they see such creatures

MELDS.S.LS.PS.3
Develops plans, based on observations and guided inquiry, to care for plants and animals in the classroom and surrounding area

MELDS.S.LS.PS.4
Observes and describes animals in his/her immediate environment to learn what they need to live

MELDS.S.LS.PS.5
Uses nature journals, tally sheets and resource materials, with support, to summarize observations (e.g., make connections between the types and numbers of birds coming to a feeder in summer or winter by counting and categorizing)

MELDS.S.LS.PS.6
Listens to accounts and discusses pictures found in fictional or non-fictional books or media to enhance vocabulary and concept knowledge of living things and their environments

MELDS.S.LS.PS.7
Identifies problems affecting the lives of plants and animals (including themselves) and generates possible solutions

MELDS.S.LS.PS.8
With teacher support, creates drawings or models for possible solutions

MELDS.S.LS.PS.9
Compares tools or solutions and reflects on what works well

MELDS.S.LS.PS.10
Designs and creates materials to change the behavior or incidence of creatures (e.g. bird feeders, butterfly gardens) in places

Social Studies
Civics & Government
MELDS.SS.CG.PS.1 Understands the reasons for rules in the home and classroom and for laws in the community

MELDS.SS.CG.PS.2
Understands and discusses why responsibilities are important

MELDS.SS.CG.PS.3
Displays awareness that rules and laws change

MELDS.SS.CG.PS.4
Participates in developing classroom rules and decisions

MELDS.SS.CG.PS.5
Assists, with support and guidance, in developing and participating in activity designed to care for the environment and/or community

Economics

MELDS.SS.E.PS.1
Explores and discusses differences between needs and wants

MELDS.SS.E.PS.2
Understands individuals may have to wait before buying a good or service they want

Geography

MELDS.SS.G.PS.1
Develops an understanding of the use and representation of simple maps, globes, and other geographic tools

MELDS.SS.G.PS.2
Describes some physical features of the community

MELDS.SS.G.PS.3
Recognizes that environmental changes can impact people, animals, and plants

MELDS.SS.G.PS.4
Displays awareness that geographic features influence how people live and work in their community and in other geographic regions

History

MELDS.SS.G.PS.1
Differentiates between past, present, and future

MELDS.SS.G.PS.2
Demonstrates a basic understanding of how things, people, and places change over time

MELDS.SS.G.PS.3
Recalls events that happened in the past, such as a family or personal history

MELDS.SS.G.PS.4
Displays awareness of similarities and differences among individuals and families

PreK for ME Suggested Pacing Calendar

2019 - 2020 School Calendar

August '19

Su	M	Tu	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

September '19

Su	M	Tu	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October '19

Su	M	Tu	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

November '19

Su	M	Tu	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

December '19

Su	M	Tu	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				
			.			

January '20

Su	M	Tu	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February '20

Su	M	Tu	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

March '20

Su	M	Tu	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April '20

Su	M	Tu	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May '20

Su	M	Tu	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June '20

Su	M	Tu	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July '20

Su	M	Tu	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

. Unit 1

Unit 2

Unit 3

Unit 4

Unit 5

Unit 6

Extension Week

IF YOU'RE HAPPY

1. If you're happy and you know it,
   clap your hands. (clap twice)
   If you're happy and you know it,
   clap your hands. (clap twice)
   If you're happy and you know it,
   then your face will surely show it.
   If you're happy and you know it,
   clap your hands. (clap twice)
2. If you're happy and you know it,
   stomp your feet. (stomp twice)…
3. If you're happy and you know it shout,
   "Hurray!" (Hurray!)…
4. If you're happy and you know it,
   do all three. (Do all three motions) …

I'M A LITTLE TEAPOT

I'm a little teapot, short and stout.
Here is my handle; here is my spout.
(Place right hand at waist.
Hold left elbow up with hand bent down.)
When I get all steamed up, hear me shout,
"Tip me over, and pour me out!"
(Bend at waist to the left.)

HEAD AND SHOULDERS, KNEES AND TOES

Head and shoulders, knees and toes,
Knees and toes.
Head and shoulders, knees and toes,
Knees and toes,
Eyes and ears and mouth and nose,
Head and shoulders, knees and toes,
Knees and toes.

CLAP YOUR HANDS

1. Clap, clap, clap your hands, (Clap)
   Clap, clap, clap your hands, (Clap)
   Clap, clap, clap your hands, (Clap)
   Clap your hands together. (Clap)
2. Stamp, stamp, stamp your feet. (Stamp feet)…
3. Shake, shake, shake your hips. (Shake hips)…
4. Bend, bend, bend your knees. (Bend knees)…

THE WHEELS ON THE BUS

1. The wheels on the bus go round and round,
   Round and round, round and round,
   The wheels on the bus go round and round,
   All through the town.
2. The people on the bus go up and down,
   Up and down, up and down,
   The people on the bus go up and down,
   All through the town.
3. The horn on the bus goes toot, toot, toot…
4. The money in the box goes ching, ching, ching…
5. The wipers on the glass goes swish, swish, swish…
6. The driver on the bus says, "Move on back"…

LOOBY LOO

Chorus:
Here we go looby loo,
Here we go looby light,
Her we go looby loo,
All on a Saturday night.

1. You put your right hand in, (Extend right hand.)
You put your right hand out, (Pull hand back.)
You give your right hand a shake, shake, shake, (Shake hand.)
And turn yourself about. Oh, (Turn around.)
{Chorus}
2. You put your left hand in…(Repeat motions.)
{Chorus}
3. You put your right foot in…(Repeat motions.)
{Chorus}
4. You put your left foot in…(Repeat motions.)
{Chorus}

OPEN, SHUT THEM

Open, shut them. (Open and shut fists.)
Open, shut them.
Give a little clap, clap, clap. (clap, clap, clap.)
Open, shut them.
Open, shut them.
Put them in your lap, lap ,lap. (Slap lap 3 times.)

Creep them, creep them. (Walk fingers up lap to chin.)
Slowly creep them.
Right up to your chin.
Open up your mouth, (Open mouth wide.)
But do not let them in. (Bring hands down quickly.)

FIVE GREEN AND SPECKLED FROGS

Five green and speckled frogs
Sat on a speckled log,
Eating some most delicious bugs
YUM! YUM!

One jumped into the pool
Where it was nice and cool.
Then there were four green and speckled frogs.
GLUB! GLUB!
{Repeat the rhyme, losing one frog each time until there are no frogs left on the log.}

FIVE LITTLE DUCKS

Five little ducks went out one day,
over the hill and far away.
Mother duck said, "Quack, quack, quack, quack."
But only four little ducks came back.
{Repeat, losing one duck each time until only one duck remains.
Have Mother duck quack loudly and end with,
"And all five little ducks came back."}

BARNYARD SONG

1. I had a cat and the cat pleased me,
   Fed my cat under yonder tree;
   Cat went, "Fiddle-ee-fee, fiddle-ee-fee."
   I had a dog and the dog pleased me,
2. I had a dog and the dog pleased me,
   Fed my dog under yonder tree;
   Dog went "Bow-wow,"
   Cat went, "Fiddle-ee-fee, fiddle-ee-fee."

3…Duck went, "Quack, quack",
(Repeat dog and cat sounds.)

4…Sheep went, "Baa, baa,"
(Repeat duck, dog, and cat sounds.)

5…Cow went, "Moo, moo,"
(Repeat sheep, duck, dog, and cat sounds.)

6…Horse went, "Neigh, neigh,"
(Repeat cow, sheep, duck, dog, and cat sounds.

THE GREEN GRASS GROWS ALL AROUND

1. There was a tree, a pretty little tree,
   The prettiest tree that you ever did see.
   The tree was in a hole and the hole in the ground,
   And the green grass grew all around.
2. Now on this tree, there was a branch,
   The prettiest branch that you ever did see.
   The branch was on the tree and the tree in the
   hole and the hole in the ground,
   And the green grass grew all around.
3. Now on this branch, there was a nest…
4. Now in this nest, there was a bird…

TWINKLE, TWINKLE, LITTLE STAR

Twinkle, twinkle, little star,
How I wonder what you are.
Up above the world so high,
Like a diamond in the sky.
Twinkle, twinkle, little star,
How I wonder what you are!

Now the traveler in the dark
Thanks you for your tiny spark;
He could not see which way to go,
If you did not twinkle so.
Twinkle, twinkle, little star,
How I wonder what you are!

APPLES AND BANANAS

I like to eat, eat, eat apples and bananas.
I like to eat, eat, eat apples and bananas.

I like to ate, ate, ate ay-ples and ba-nay-nays.
I like to ate, ate, ate ay-ples and ba-nay-nays.

I like to eat, eat, eat ee-ples and bee-nee-nees.
I like to eat, eat, eat ee-ples and bee-nee-nees

I like to ite, ite, ite i-ples and by-ny-nys.
I like to ite, ite, ite i-ples and by-ny-nys.

I like to ote, ote, ote oh-ples and bo-no-nos.
I like to ote, ote, ote oh-ples and bo-no-nos.

I like to oot, oot, oot oo-ples and boo-noo-noos.
I like to oot, oot, oot oo-ples and boo-noo-noos.

HUSH, LITTLE BABY

Hush, little baby, don't say a word,
Papa's going to buy you a mockingbird;
And if that mocking bird won't sing,
Papa's going to buy you a diamond ring;
If that diamond ring turns brass,
Papa's going to buy you a looking glass;
If that looking glass gets broke'
Papa's going to buy you a billy goat;
If that billy goat won't pull,
Papa's going to buy you a cart and bull;
If that cart and bull turn over,
Papa's going to buy you a dog named Rover;
If that dog named Rover won't bark,
Papa's going too buy you a horse and cart;
If that horse and cart fall down,
You'll still be the sweetest baby in town!

DOWN BY THE BAY

1. Down by the bay (echo)
Where the watermelons grow, (echo)
Back to my home, (echo)
I dare not go. (echo)For if I do, (echo)
My Mother will say, (echo)
"Did you ever see a snake baking a cake?"
Down by the bay.
2. …"Did you ever see a frog walking a dog?"…
3. …"Did you ever see a mouse painting a house?"…

Suggestion:

Make up new rhyming verses (a pig dancing a jig,
a cow taking a bow, a hen counting to ten…).

BINGO

1. There was a farmer had a dog,
And Bingo was his name-o.
B-I-N-G-O,
B-I-N-G-O,
B-I-N-G-O,
And Bingo was his name-o.
2. …(clap)-I-N-G-O!...
3. …(clap)-(clap)-N-G-O!...
4. …(clap)-(clap)-(clap)-G-O!...
5. …(clap)-(clap)-(clap)-(clap)-O!...
6. …(clap)-(clap)-(clap)-(clap)-(clap)

THE MORE WE GET TOGETHER

Oh, the more we get together,
Together, together,
Oh, the more we get together,
The happier we'll be.

For your friends are my friends,
And my friends are your friends,
Oh, the more we get together,
The happier we'll be.

OLD MACDONALD HAD A FARM

1. Old MacDonald had a farm, E-I-E-I-O!
   And on his farm he had some chicks,
   E-I-E-I-O!
   With a chick, chick here, and a chick, chick there,
   Here a chick, there a chick, ev'rywhere a chick, chick.
   Old MacDonald had a farm, E-I-E-I-O!
2. And on his farm he had some ducks,
   E-I-E-I-O!
   With a quack, quack here, and a quack, quack there,
   Here a quack, there a quack, ev'rywhere a quack, quack.
   Chick, chick here, and a chick, chick there,
   Here a chick, there a chick, ev'rywhere a chick, chick.
   Old MacDonald had a farm, E-I-E-I-O!

3…cow…a moo, moo here…(repeat duck & chick sounds)

4…turkey…a gobble, gobble here…(repeat cow, duck, & chick sounds)

MARY HAD A LITTLE LAMB

Mary had a little lamb,
Little lamb, little lamb,
Mary had a little lamb,
Its fleece was white as snow.

And everywhere that Mary went,
Mary went, Mary went,
Everywhere that Mary went,
The lamb was sure to go.

It followed her to school one day,
School one day, school one day,
It followed her to school one day,
Which was against the rule.

It made the children laugh and play,
Laugh and play, laugh and play,
It made the children laugh and play,
To see a lamb at school.

And so the teacher turned it out,
Turned it out, turned it out,
And so the teacher turned it out.
But still it stayed quite near.

And waited patiently about,
Patiently about, patiently about,
And waited patiently about,
Till Mary did appear.

"Why does the lamb love Mary so?
Love mary so? Love Mary so?
Why does the lamb love Mary so?"
The eager children cry.

"Why mary loves the lamb, you know.
Loves the lamb, you know,
loves the lamb, you know,
Why, Mary loves the lamb, you know,"
The teacher did reply.

CLAP YOUR HANDS (with different words)

1. Dig, dig, dig the ground
   Dig with your hands
   Dig, dig, dig the ground
   Dig with your hands
2. Plant, plant, plant the seeds
   Plant all the seeds
   Plant, plant, plant the seeds
   Plant all the seeds
3. Pull, pull, pull the weeds
   Pull all the weeds
   Pull, pull, pull the weeds
   Pull all the weeds
4. Eat, eat, eat the beets
   Eat the beets, Yum Yum
   Eat, eat, eat the beets
   Eat the beets, Yum Yum

WHAT ARE YOU WEARING

1. Mary's wearing a red dress, red dress, red dress.
   Mary's wearing a red dress all day long.
2. Pedro's wearing a white shirt…
3. Keisha's wearing a blue coat…
4. Tony's wearing a yellow hat…

EENTSY, WEENTSY SPIDER

The eentsy, weentsy spider went up the water spout.
Down came the rain and washed the spider out.
Out came the sun and dried up all the rain,
And the eentsy, weentsy spider went up the spout again.

COME ON AND JOIN IN TO THE GAME

1. Let everyone clap hands like me. (clap, clap)
   Let everyone clap hands like me. (clap, clap)
   Come on and join in to the game,
   You'll find that it's always the same. (clap, clap)
2. Let everyone sneeze like me. (ah-choo!)
   Let everyone sneeze like me. (ah-choo!)
   Come on and join in to the game,
   You'll find that it's always the same. (ah-choo!)
3. Let everyone yawn like me. (yawn, yawn)
4. Let everyone jump like me. (jump)
5. Let everyone sit down like me. (sit)
6. Let everyone laugh like me. (ha-ha)

BINGO (WITH SNAKE)

1. There was a girl who had a friend,
   And Snake was his name-o.
   S-N-A-K-E,
   S-N-A-K-E,
   S-N-A-K-E,
   And Snake was his name-o.
2. …(clap)-N-A-K-E,!...
3. …(clap)-(clap)-A-K-E,!...
4. …(clap)-(clap)-(clap)-K-E,!...
5. …(clap)-(clap)-(clap)-(clap)-E!...
6. …(clap)-(clap)-(clap)-(clap)-(clap)

BINGO (WITH TILLY)

1. There was a boy who had a friend,
   And Tilly was her name-o.
   T-I-L-L-Y,
   T-I-L-L-Y,
   T-I-L-L-Y,
   And Tilly was her name-o.
2. …(clap)-I-L-L-Y!...
3. …(clap)-(clap)-L-L-Y!...
4. …(clap)-(clap)-(clap)-L-Y!...
5. …(clap)-(clap)-(clap)-(clap)-Y!...
6. …(clap)-(clap)-(clap)-(clap)-(clap)

BINGO (WITH VICKY)

1. There was a girl who had a dog,
   And Vicky was her name-o.
   V-I-C-K-Y,
   V-I-C-K-Y,
   V-I-C-K-Y,
   And Vicky was her name-o.
2. …(clap)-I-C-K-Y!...
3. …(clap)-(clap)-C-K-Y!...
4. …(clap)-(clap)-(clap)-K-Y!...
5. …(clap)-(clap)-(clap)-(clap)-Y!...
6. …(clap)-(clap)-(clap)-(clap)-(clap)

BINGO (WITH PETER)

1. There was a boy who mailed a letter,
   And Peter was his name-o.
   P-E-T-E-R,
   P-E-T-E-R,
   P-E-T-E-R,
   And Peter was his name-o.
2. …(clap)-E-T-E-R!...
3. …(clap)-(clap)-T-E-R!...
4. …(clap)-(clap)-(clap)-E-R!...
5. …(clap)-(clap)-(clap)-(clap)-R!...
6. …(clap)-(clap)-(clap)-(clap)-(clap)

BINGO (WITH CLARA)

1. There was a girl who loved a dog,
   And Clara was her name-o.
   C-L-A-R-A,
   C-L-A-R-A,
   C-L-A-R-A,
   And Clara was her name-o.
2. …(clap)-L-A-R-A!...
3. …(clap)-(clap)-A-R-A!...
4. …(clap)-(clap)-(clap)-R-A!...
5. …(clap)-(clap)-(clap)-(clap)-A!...
6. …(clap)-(clap)-(clap)-(clap)-(clap)

Small Groups
(15 minutes)

Small Groups provides children with hands-on, targeted learning opportunities that are grounded in core concepts related to the Read Alouds. Key vocabulary and references to the text are used throughout. The expectation is that each child in the classroom participate in each literacy and math Small Group throughout the week.

There are three Small Groups within one week: a high support group led by the teacher, a medium support group led by the Educational Technician (Ed Tech), and one independent group. Clear routines and expectations will support not only the independent groups but will help to minimize disruptions to the adult-led groups.

Small Group composition should be flexible and intentionally planned, based on observations, assessments, and other data.

During Math Small Groups, children engage in activities designed to move them through the math trajectories. See the math Guiding Documents for more information.

Teachers divide their classroom into three groups.

Full Day classrooms rotate through three groups in three days. Small group rotation will sometimes continue the following week. See Weekly Plan for roll-out.

Part Day classrooms also rotate through three groups in three days. However, the other two days of the week, another component will take the place of Small Groups. Since there are more Small Group lessons offered than you could do in a part day classroom, it is up to the teacher to select the small groups, based on the needs of the students. See Weekly Plan for roll-out.

Small Groups could also be extended to a 5th week, before starting the next unit.

Songs, Word Play, Letters (SWPL)
(15-20 minutes)

Songs, Word Play and Letters (SWPL) builds print and phonological awareness through word games, songs, poems, and predictable texts. Children interact with and attend to features of language such as letter names, letter sounds, and rhyme. Activities follow a progression of skill development from exposure to mastery over time.

SWPL is presented on the Clipboard Directions. Math whole group activities can also take place during SWPL, as can math chants, poems and movement activities. Please refer to the math Guiding Documents for more information.

Adjustments to SWPL can include changing the sequence of activities, adding movement or visual supports, and using supplemental songs and poems. These adjustments should maintain the progression of literacy and math skills along trajectories. Also, SWPL activities can be woven throughout the day during transitions. SWPL can be extended to a fifth week, before starting the next unit to ensure progression of trajectories.