Department of Education
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PRE-K FOR ALL

Transformation: Explore

Interdisciplinary Unit of Study
NYC DOE

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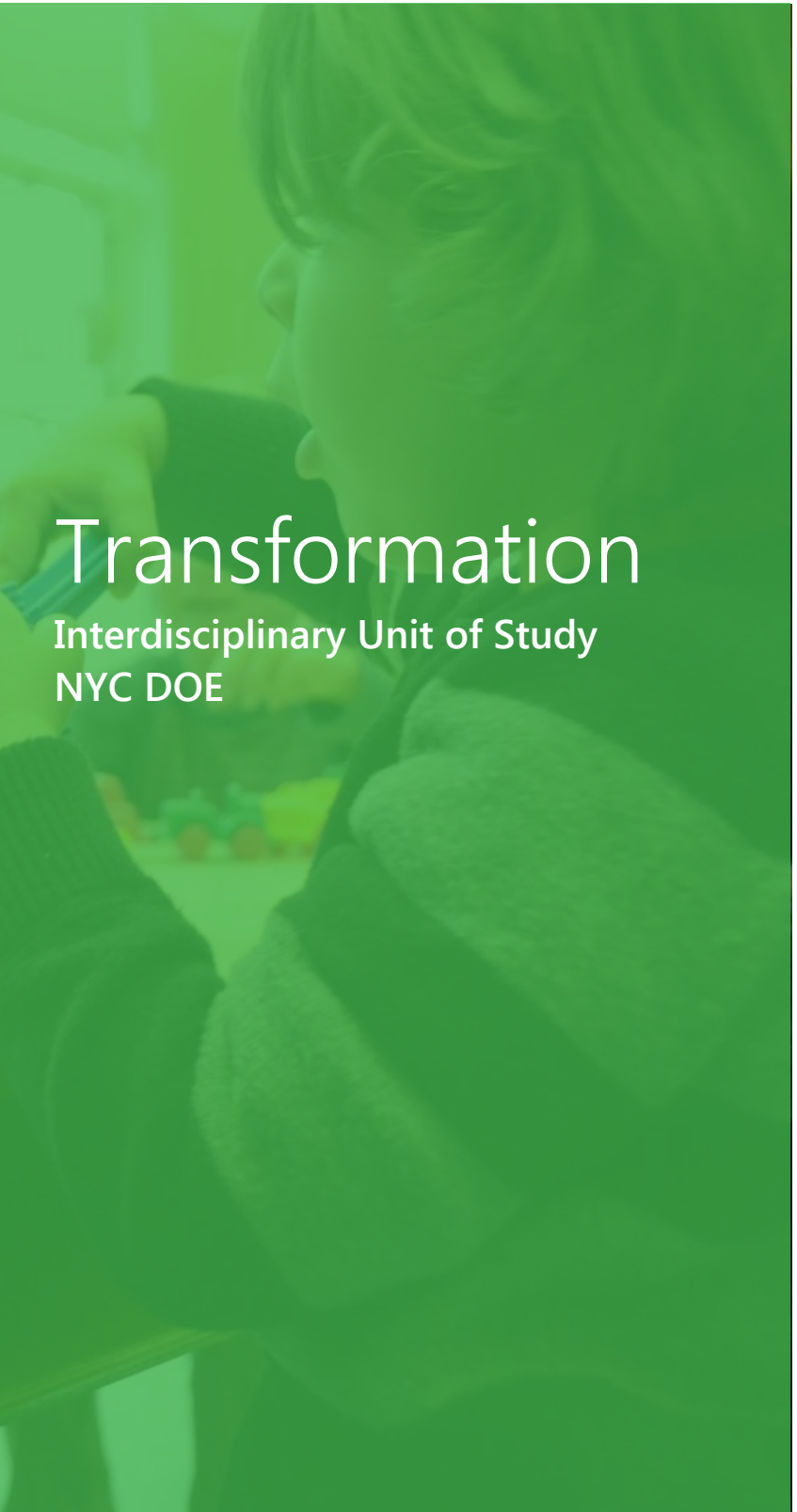

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I. Unit Snapshot: Goals and Standards

Unit Topic: Transformation

Essential Question:

What is transformation and how do things change?

Focus Questions:

What changes around me?
How can objects change?
What kinds of change happen in nature?
How will I continue to change and grow?

Student Outcomes:

What the student should understand by the end of the unit.

Enduring Understandings:

- Many things around me change.
- There are many ways objects can change.
- There are many kinds of changes in nature.
- Some things about me change and some things stay the same.

Connected Academic Vocabulary:

This list should be adapted to best fit the needs of individual programs and classrooms.

•after •appearance •bigger •birth •birthday •butterfly •camouflage •caterpillar •change •chrysalis •cocoon •combine •continue •cycle •darker •date •develop •disguise •egg •entomologist •evaporate •experience •feelings •feet • freeze •grow •harder •heavier •inches •independent •kindergarten •larger •larva •learn •less •life cycle •lighter •longer •magnify • metamorphosis •more •narrower •newer •objects •older •parent •pupa •purpose •recycle •repurpose •responsible •reuse •seasons •shrink •shorter •smaller •softer •stages •state •taller• time •transform •transition •weather •wider

Focus Standards from the Prekindergarten Foundation for the Common Core (PKFCC):

Domain 1: Approaches to Learning

PK.ATL.1 Actively and confidently engages in play as a means of exploration and learning.

Domain 2: Physical Development and Health

PK.PDH.7 Demonstrates personal care and hygiene skills.
PK.PDH.8 Demonstrates awareness and understanding of healthy habits.

Domain 3: Social and Emotional Development

PK.SED.7 Adapts to change.

Domain 4: Communication, Language and Literacy

Reading Standards for Literature
PK.CLL.9 With prompting and support, students will compare and contrast two stories relating to the same topic.

Reading Standards for Informational Text
PK.CLL.10 With prompting and support, actively engage in group reading activities with purpose and understanding.

Language Standards
PK.CLL2 Demonstrates command of the conventions of standard English grammar and usage when writing or speaking.
PK.CLL.3 Use knowledge of language and how language functions in different contexts.
PK.CLL.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on pre-kindergarten reading and content.

Domain 5: Cognition and Knowledge of the World

Mathematics
PK.CKW.1 (Counting and Cardinality): Count to 20.
PK.CKW.1 (Operations and Algebraic Thinking): Demonstrate an understanding of addition and subtraction by using objects, fingers and responding to practical situations (e.g. if we have 3 apples and add 2 more, how many apples do we have all together?).
PK.CKW.2 (Geometry): Create and build shapes from components (e.g. sticks and clay balls).

Science
PK.CKW.3 Generates explanations and communicates conclusions regarding experiments and explorations.
PK.CKW.4 Observes and describes characteristics of earth and space.
PK.CKW.5 Observes and describes characteristics of living things.

PK.CKW.6 Acquires knowledge about the physical properties of the world.

Social Studies
PK.CKW.4 Develops an understanding of how people and things change over time and how to relate past events to their present and future activities.

The Arts
PK.CKW.4 Responds and reacts during musical activities
PK.CKW.6 Responds and reacts to theater and drama presentations.
PK.CKW.8 Responds and reacts to dance and creative movement.
PK.CKW.9 Expresses an understanding of artistic difference among cultures.

II. Introduction

Welcome to **Unit 10: Transformation**, Pre-K for All's tenth and last Interdisciplinary Unit of Study. In **Unit 10: Transformation**, children conclude the year by investigating how things change over time. This unit, like all Pre-K for All units, provides opportunities for children to observe objects and phenomena in their environment with increasing complexity. As the final pre-K unit, it is an opportunity to not only apply knowledge and skills children learned in previous units, but also to prepare and think about the transition will bring for the children in your class.

To *transform* means to make a thorough or dramatic change in form, appearance or character. To learn this concept, children will begin the unit by considering the question "What changes around me?" Activities in week one help children express what they already know and extend their learning through play, literature and discussion. Children might notice that trees change with the seasons, or a neighborhood change such as the building of a new store. Children will begin to explore how they are agents of change in a variety of ways, including activities where they can change the shape of an object or objects. Children will also explore how their feelings change and how their actions and words can impact others' feelings. These discussions and activities will help children develop concepts and skills related to self-awareness, self-regulation and relationship with others (skills outlined in Domain 3 of the PKFCC) that will be key as they transition into Kindergarten. In week two, there are opportunities to investigate how objects change and why. Building on skills they learned in **Unit 7: Water**, children will explore changes in state (e.g. water to ice) as well as repurposing, reusing and recycling materials.

In week three children will build on learning from Units 7 through 9 by investigating changes in nature. There are opportunities to discuss and learn about *metamorphosis* through studying the life cycle of insects such as butterflies as well as to notice changes in weather and seasons. Neighborhoods throughout New York City provide opportunities to observe change, either in your programs surrounding area or in

photographs. The activities in this week (and throughout the unit) provide opportunities for embedded literacy development such as learning new vocabulary, storytelling and learning about the relationship between letters and their sounds. Look through Section V: Supporting Texts, for informational texts that will support children's learning and exploration throughout the unit.

Within the topic of transformation, as with all units, there is a reflective component. In week four, children will have the opportunity to reflect on their own growth and consider how they will continue to change. This builds on learning they have done throughout the year to develop a strong self-concept (*PK.SED.1: Recognizes himself/herself as a unique individual having his/her own abilities, characteristics, feelings and interests*) by reflecting on things about them that have changed as well as things about them that do not change. When discussing change and transformation, there is also an emotional component. Children may bring up or be thinking about changes in their life that may be sensitive, complex or challenging such as moving homes or changes in their family structure. Children may also have different feelings about preparing to leave the pre-K classroom and entering Kindergarten. Children's play and behavior may reflect their feelings about upcoming transitions. Look for opportunities to discuss their feelings and talk about what might be the same about Kindergarten and what might be different. Think about what transition activities might be appropriate for your children, for example visiting a nearby Kindergarten if that is available to you or providing pictures of the schools that children will be attending. You may have been collecting children's work throughout the year in a portfolio. To highlight the reflective and emotional components of this last unit, you may choose to use this work in a culminating activity such as a Transformation Portfolio or to create a Goodbye Book for each child.

Parents, siblings, and extended family members can play an active role in helping their pre-K child prepare for the transition to Kindergarten. Families can support their pre-K child by asking open-ended questions about what they think Kindergarten will be like, engage the child in an active reflection of memories from the beginning of their pre-K experience, provide positive examples of the way in which they have observed their child develop and transform over the year, and revisit coping strategies the child may have learned to manage different feelings and situations. Families can facilitate this conversation by drawing pictures or reading books related to the topic of transitions in school or feelings about change. This builds on learning they have done throughout the year to develop their capacity for adaptability (*PK.SED.7: Adapts to change)* by using multiple strategies to cope with change, such as seeking social support from an adult or peer or engaging in different activities that are comforting.

As the end of the year approaches, it is vital that children continue to have the opportunity to explore learning through Centers. Throughout Section IV: Ideas for Learning Centers you will notice activities that were originally introduced in previous units. An element of change has been written into each suggestion as a means for children to revisit and build on prior experiences as well as further understand changes and transformation in the world around them. These activities begin with "Reintroduce." The Δ symbol is used to identify the new portion of the activity. If you have not introduced these activities previously simply introduce them to the children as a new activity. Throughout this section there are also opportunities for children to problem-solve around "challenges," either individually or in small groups. Marked by numbered

circles such as ❶, challenges require children to transform or change objects in the classroom to solve a problem, such as building a bridge over a river. Challenges allow children to apply and integrate the critical thinking, inquiry, social and language skills developed throughout the year that will play an important role in their continued success. You may decide to focus on transformation challenges as a culminating activity, and invite staff and family members into the classroom to learn about how children solved these challenges.

III. Unit Framework

Unit Topic	Transformation
Essential Question This is a child-friendly question that connects the knowledge and skills that children should develop throughout the unit.	What is transformation and how do things change?
Enduring Understandings These are the big ideas that children should remember throughout their educational careers and extend beyond the unit topic.	○ Many things around me change. ○ There are many ways objects can change. ○ There are many kinds of changes in nature. ○ Some things about me change and some things stay the same.

	Week One	**Week Two**	**Week Three**	**Week Four**
Focus Questions These questions represent the major inquiries of the unit. They build over time and require children to make connections across all content areas. Each focus question is designed to take about one week to explore.	What changes around me?	How can objects change?	What kinds of change happen in nature?	How will I continue to change and grow?

Foundational Learning Experiences These are experiences (e.g., whole group, small group lessons, field trips, observations, center activities) for each subtopic that provide ample opportunities to deepen children's understanding of the Focus Questions.	Foundational Text Read Aloud: Little Tree by Loren Long. See page 43 for lesson plan and **Section IX** for Inquiry and Critical Thinking Questions. *PK.SED.1 Recognizes himself/herself as a unique individual having his/her own abilities, characteristics, feelings and interests.* See page 43 for lesson plan.	Paper Making (Centers): Invite children to work together to create a new piece of paper from pieces of previously used paper and paper scraps in the sensory table or in an additional bin or container. Fill the table or container with shredded or ripped paper, add water and invite the children to mash the paper and water to create a pulp. Follow the directions in the lesson plan to remove the pulp from the table and create individual sheets of paper. *PK.CKW.4 (Science): Observes and describes characteristics of earth and space.* See page 46 for lesson plan.	Metamorphosis Dance (Whole Group): After reading a book about the metamorphosis of an insect or amphibian aloud to the class, work with them to isolate each stage of metamorphosis, generate a list of words relevant to each and create a representational dance. Children can take turns as performers and audience members. *PK.CKW.7 (The Arts): Expresses what s/he knows, thinks, feels and believes through dance and creative movement.* See page 50 for lesson plan.	Now and Later (Small Group): Invite children to reflect on the things they can do now and things they would like to do in the future. Fold a piece of paper in half, title one side "Now" and the other "Later." Talk with children about the things they can do now and things they are looking forward to doing when they are older. Write children's responses on the paper or invite them to do their own writing; help them pay special attention to the sounds they hear in the words. *PK.CKW.4 (Social Studies): Develops an understanding of how people and things change over time and how to relate past events to their present and future activities.* See page 53 for lesson plan.
Foundational Texts These are a combination of literary and informational texts that can be read throughout the unit. See **Section IX** for text-based critical thinking questions	Little Tree by Loren Long	Joseph Had a Little Overcoat by Simms Taback	*The Very Hungry Caterpillar by Eric Carle	What Do You Do With an Idea? by Kobi Yamada
	Engaging informative and literary texts provide opportunities for exploring content, expressing ideas using one's imagination and critical thinking that are enhanced through multiple readings of the same book. Reading books multiple times helps all children build a deeper understanding of content, make meaningful connections between content and other concepts or experiences and builds their confidence as learners and as future readers. When you have a text that			

to support the read aloud experience. PK.CLL.5 (*Reading Standards for Literature): Students interact with a variety of common types of texts.* **Books with an asterisk are also available in languages other than English.*	draws the interest of the children in your class, consider one or more of the following techniques for reading the book multiple times to extend children's thinking: • Take a "picture walk" through the book the first time you read it by just showing the pictures and asking the children what they see and what they think the book is about. • Model skills readers use to gain greater understanding of content by thinking out loud about the meaning of a word in context or drawing a conclusion based on prior knowledge. • Write down and post children's responses to questions with more than one possible answer. • Ask children to make predictions based on what they know so far and ask them to explain their thinking. • Pause throughout the book and ask children to share a new word or idea they heard and explain it using familiar words or contexts. • Invite children to make connections between the book and their own life experiences. • Brainstorm potential solutions to a problem a character might be facing. • Ask children what the character could do differently or ask them what they might do if they were in the place of the main character. • As the book becomes familiar to the children, ask for volunteers to "read" it to you or small groups of children, letting them describe the pictures and the story in their own words. • Compare and contrast books with similar content, themes or structures. • Preview or review texts or parts of texts (particularly vocabulary) for children who need additional language or learning support. • As children become more familiar with the story or information, use this as the beginning of extension activities like acting out a story, painting or drawing something inspired by the text, or creating puppet shows.			
Key Vocabulary These are academic vocabulary words that help children understand the unit focus questions and access complex texts. These words can be supplemented by additional vocabulary in read alouds.	appearance, change, date, feelings, larger, longer, narrower, objects, state, shorter, seasons, transform, transition, weather	after, bigger, camouflage, combine, continue, darker, develop, disguise, evaporate, feet, freeze, grow, harder, heavier, inches, less, lighter, magnify, more, newer, off, older, purpose, recycle, repurpose, reuse, shrink, smaller, softer, stages	birth, butterfly, caterpillar, chrysalis, cocoon, cycle, egg, entomologist, larva, life cycle metamorphosis, pupa	adult, birthday, experience, independent, kindergarten, learn, parent, responsible, taller, time

Family and Community Engagement These are ideas for inviting families to share their experience and knowledge with the class, or for extending learning outside of the classroom. Each activity is aligned to the PQS.	Ask families to save and bring in old newspapers, magazines and/or pieces of paper for the class to use to make paper the following week. They can use the opportunity to talk with their child about how we reuse and recycle objects. *Primary Teacher*	Invite families to come in and bake or cook with the classroom. Families can share a child friendly recipe, make it with the children and enjoy it in the classroom together. If families are not able to come into the classroom, encourage them to do a simple cooking activity at home and discuss how foods change when they make snacks or meals (e.g. adding milk to cereal, cooking carrots, or making pasta or rice). Follow all safety rules and keep in mind that a visiting adult should never be left unsupervised with the children. *Two-way Communication*	Encourage families to visit a park on their way home or look at trees in their neighborhood. What has changed about the trees since winter? If possible, draw a picture of what the tree looked like in the winter and what it looks like now that it is spring and compare the two. *Primary Teacher*	Encourage families to visit or walk past the school their child will be attending in the fall and discuss what looks different and the same about their current program and their new school. If possible, families can visit the Kindergarten classroom that their child will attend. *Primary Teacher*
Culminating Experience This is an opportunity to reflect on the unit with the children, as well as to note and celebrate the growth and learning that has occurred.	Transformation Portfolio: At the beginning of this unit share with children that they will have the opportunity to create their own portfolio or collection of work about transformation during this study. Provide, or invite them to help create, a place to store their transformation-related work. Encourage children to select unit-related work to save in their portfolios or teachers can take pictures of children's transformation experiences. At the end of the unit families can visit the classroom and view the children's work and/or children can take home the Transformation Portfolio to share with their families. OR Transformation Challenge: Create a challenge or challenge(s) for children to solve similar to those included in Section IV: Ideas for Learning Centers and have children work together in small groups or as a class to solve them. Encourage children to consider how they are agents of change and can use and transform materials in order to find solutions to the			

	challenge(s). Invite guests into the classroom to view children's solutions or to work with the children to create solutions together. OR Goodbye Book: Work individually with each child to choose a few pictures and/or pieces of work that they have created throughout the year. Collect these images into a short book and write, or work with the child to write, a "goodbye pre-K" book. See Section XI: Appendices, for an example.

IV. Ideas for Learning Centers

Even at the end of the year, play-based learning and Learning Centers continue to be the optimal modes for children's learning in pre-K, and build toward continued success in Kindergarten and beyond. Learning Centers should be used to advance the unit's essential and focus questions, as well as the enduring understandings, and reflect the unit of study and the needs and interests of your children. As noted in the NYC Pre-K for All Scope and Sequence, as a component of the NYC Pre-K for All Interdisciplinary Units of Study, the Learning Center suggestions below are aligned with NYC DOE Kindergarten Science and Social Studies Scope and Sequences.

The interactions between adults and children offer an opportunity to model, encourage and facilitate the use of language to ask higher order thinking questions as well as to create meaningful entry points into new content. This time of year can be especially important for teaching teams to help children go deeper in their language development, inquiry, problem-solving skills and concept development during centers. Be persistent and supportive as you ask children questions and follow up on their responses to engage in deeper conversations. It is likely that children's play will have increased in complexity across the year; they may now be ready to make more connections between previous learning and the current unit of study and be ready for additional challenges. Children better understand concepts when teachers provide opportunities to analyze and solve problems rather than when they are asked to simply memorize and recite facts. Throughout the ideas below there are activities built around challenges, marked with a number in a circle. These activities are intended to help children consider how they can use and transform materials as well as be agents of change. One way to build higher order thinking skills is to create connections to the real world and to the prior experiences of children. Throughout the suggestions below you will notice activities that were originally introduced in previous units. An element of change has been written into each suggestion as a means for children to revisit and build on prior experiences as well as further understand changes and transformation in the world around them. These activities begin with "Reintroduce." The original activity description is listed then followed by a paragraph explaining how an element of transformation has been added to the activity. The Δ symbol is used to identify the new portion of the activity. If you have not introduced these activities previously simply introduce them to the children as a new activity.

The following suggestions supplement the standard materials you have in each center, such as blocks in the Blocks/Construction Area, assorted dress-up materials in Dramatic Play, paper and a variety of writing utensils in the Writing Center, etc. As you plan your learning centers, also consider how you will provide multiple entry points into the materials for all the children in your classroom. The suggested materials and activities are intended to be relatable and fun! This is not an exhaustive list of materials and can be supplemented by other materials relevant to the unit and your classroom.

While the materials you select for centers are extremely important, learning is made richer through the interactions adults and children have during Center Time. **Program Quality Standard (PQS) Eight, Engaging Children in Meaningful Activity,** highlights the necessary balance between adult and child-initiated learning experiences as well as some ways teaching staff can enhance children's learning in center play. When teaching staff interact with children in centers they can model language through initiating, joining and extending conversations, using self and parallel talk, and asking open-ended questions that deepen engagement and **inquiry** while developing problem solving and **critical thinking skills.**

Play is an important vehicle for developing a variety of skills outlined in the PKFCC and is woven into many of the PQSs. Rather than detracting from academic learning, purposeful play supports the abilities that underlie such learning. When children have a sufficient amount of time to play and can access learning centers and the materials in them, they have some of the essential supports necessary for their play to continue developing in complexity. The play-based learning that happens in centers addresses **PKFCC Standard PK.AL.1 (Actively and confidently engages in play as a means of exploration and learning)**. This same play helps children develop the background knowledge of **PKFCC Standard PK.CLL.4 (Demonstrates s/he is building background knowledge)** which is essential for making connections and deepening understandings. For these reasons, teachers should ensure that children have access to and can choose from a variety of learning center materials for one-third of the pre-K day, and support children's engagement in play during Center Time, making adjustments to the daily schedule to weave in small and whole group activities without infringing on that time. PKFCC standards are included for all of the activity suggestions here and opportunities for assessment are embedded. Text suggestions that complement these materials and activities are also included.

Blocks/Construction	**Dramatic Play**
• Critical thinking questions/statements: Tell me about your work. You just ___; what would happen if you ___? Why? How do you know? How could you build ___? What is your conclusion? • Taller: Begin building a tower in the Blocks/Construction Area. Invite children to make the tower taller. Ask them to think about how they can make the tower taller and then work together on this task. Encourage them to see how tall they can make the tower. Consider	• Critical thinking questions/statements: Who are you going to be today? I wonder what would happen if ___. What will you do next? What do you think about ___? • Moving Day: Set up dramatic play as a home. Add boxes and moving supplies such as tape, labels, writing utensils, etc. for children to use to pretend to move to a new home. Consider partnering with families of

suggesting other ways for children to change the tower such as making it smaller, wider or narrower.
PK.ATL.1 Actively and confidently engages in play as a means of exploration and learning.

- ❶Bridge Challenge: Use paper to create a small river in the Blocks/Construction Center. Challenge children to create a bridge from materials in this center to cross the river. As children are successful with this activity increase the width of the river leading them to problem solve and create longer bridges. Invite children to name their bridges and provide paper and writing utensils for children to add labels accordingly.
PK.ATL.2. Actively engages in problem solving.
- How Tall Are You? Invite children to measure each other with blocks. Provide tools for recording such as paper and writing utensils. After children measure each other invite them to predict how tall they think they will be when they are grown up. Observe how children measure each other (e.g. standing or lying down) throughout the activity.
PK.CKW.1 (Measurement and Data): Identify measurable attributes of objects, such as length and width. Describe them using the correct vocabulary (e.g. small, big, short, tall, empty, full, heavy and light).
√ Opportunity for Assessment
What vocabulary does the child use to describe his/her height?
- Reintroduce Blocks and Building Materials: Provide various types of blocks and building materials for children such as Lincoln Logs, small blocks, big blocks (cardboard or wood), Duplos, etc. that you have available. This may be a good time to rotate building materials. Encourage children to build their own homes or buildings near where they live (Unit 4: Where We Live).

  Δ Talk with children about how they can combine and transform the materials (i.e. Lego pieces, individual blocks) into something new (a structure) as they work. Use this as a conversation starter to discuss the changes that occur when homes or buildings are built, rebuilt or remodeled. Children can also create subway lines

children who may be anxious about an upcoming move to discuss resources and strategies to make the transition smooth.
PK.CKW.4 (Social Studies): Develops an understanding of how people and things change over time and how to relate past events to their present and future activities.

- Entomologist Lab: Create an entomologist lab for the children to study insects. Provide small toy insects, microscopes and magnifying glasses, lab coats, goggles, paper for note taking and observations as well as literature on insects, pictures of insects and insects in various stages of the life cycle. Invite children to study the insects paying close attention how insects change throughout their lives.
PK.CKW.5 (Science): Observes and describes characteristics of living things.
√ Opportunity for Assessment
What does the child do or say as s/he plays that demonstrates understanding of insect life cycles?
- Kindergarten: Invite children to create a kindergarten classroom in the dramatic play area. They can discuss what they think kindergarten will be like, create a classroom accordingly and then take on roles and pretend it is the beginning of their kindergarten year. Children can look through Kindergarten, Here I Come or other books about kindergarten for ideas if needed.
PK.SED.7 Adapts to change.
- Disguises: Provide materials children can use to create disguises such as hats, a variety of glasses, mustaches/beards, wigs, and various clothing items. Use the word *disguise* frequently and talk with children about how a disguise can change their *appearance* or the way they look. If possible take pictures of children in their disguises and invite other people to guess the identity of each disguised child. Use these pictures to create a class book.
PK.ATL.1 Actively and confidently engages in play as a means of exploration and learning.
- Reintroduce Meteorologist: Invite children to pretend to give the weather forecast. Provide clothing for children to use to pretend they are meteorologists on TV, a large map, pictures of various types of

connecting their buildings. Model using words related to change such as taller, shorter, bigger and smaller as the children play. *PK.ATL.1 Actively and confidently engages in play as a means of exploration and learning.* • Suggested Text: Changes, Changes by Pat Hutchins. Encourage children to build one of the structures from the story or create their own story using blocks. Provide paper and writing utensils for children who want to draw/write their story as well.	weather, and weather charts for children to read. Help them read the weather maps and ask them questions about what they see. (Unit 7: Water). Δ As children play with these materials encourage them to consider how weather changes and how people respond to changes in weather. They could point out how the weather will change and what people might want to do to prepare (e.g. It is sunny now but the weather is changing and clouds are rolling in; you may want to bring an umbrella today!). Use words such as *weather* and *change* frequently throughout this activity. *PK.CKW.4 (Science): Observes and describes characteristics of earth and space.* • Adults: Provide props for children to pretend they are adults such as clothing or uniforms for work, purses, wallets, pretend money, credit cards, keys, MetroCards, etc. Talk with children about how they will change as they grow up and invite them to pretend they are adults. Observe how children act and speak as they take on an adult role. Be sensitive to children who may reflect complex adult circumstances in their play. *PK.CLL.3 (Language Standards): Use knowledge of language and how language functions in different contexts.* • ❷ House Challenge: If available, provide large blocks as well as sheer fabric pieces and challenge children to transform these materials into a house big enough for them to fit inside. After children have created a fort they can play in it. *PK.ATL.2 Actively engages in problem solving.* • Suggested Text: We Have a Baby by Cathryn Falwell. Set up the Dramatic Play area as a home. Invite children to pretend a new baby will be coming to live with them and refer them to We Have a Baby by Cathryn Falwell to determine what they might need to do to care for the baby.
Art	**Science/Discovery** • Critical thinking questions/statements: What did you observe here/when ___? What did your sense of ___ tell you about ___? What

- Critical thinking questions/statements: What did you notice about ___? I notice that you ___; how did you do that? What will you try next? Why? How does this picture, painting, drawing etc. make you feel?
- Always Me: Invite children to create representations of themselves using a variety of mediums (pencil and paper, paint, clay, collage materials, etc.) over a series of days (one medium per day). Provide mirrors for them to look carefully at their features. After they have several representations of themselves display their pieces of work together and invite children to talk about what things are the same in every piece (e.g. "I always have eyes"). Point out to the children that even though many things change some things always stay the same. If self-portraits from the beginning of the year are available include these in the displays and encourage children to compare them to their current self-portraits.
  PK.SED.1 Recognizes himself/herself as a unique individual having his/her own abilities, characteristics, feelings and interests.
- Rain Painting: Invite children to use spoons to make very small piles of powdered tempera paint on a large piece of paper. Place the paper outside in a light rain or provide spray bottles filled with water and invite children to mist the paper with the water and watch as the powdered tempera paint changes. Ask children what happened and why.
  PK.CKW.3 (Science): Generates explanations and communicates conclusions regarding experiments and explorations.
- Weather Art: Provide materials that children can use to represent a variety of weather experiences such as yellow paint and glitter for sunshine, pipettes and light blue paint for rain, cotton balls for clouds, etc. Divide a large piece of paper into several sections and invite children to create a different type of weather in each section or let children create several different art pieces, one for each type of weather they would like to represent, and display them together. Consider providing pictures of weather related artwork such as *View of Toledo* by El Greco or *Coucher de soleil no. 1* by Jean Metzinger. Later in the day/week children can label their pieces with names of the kinds of weather.

will you try next? I wonder what would happen if ___. How do you know? How could we find out?

- Temperature: Place a thermometer outside a classroom window in a place where children are able to see the thermometer. Invite them to observe and record/chart and discuss the changes they notice.
  PK.CKW.4 (Science): Observes and describes characteristics of earth and space.
- Vinegar and Baking Soda: Ask children to predict what might happen when you combine baking soda and vinegar. Have them record their predictions (or record for them) and provide the two materials for them to experiment with. Provide measuring spoons and encourage children to experiment with differing amounts of baking soda and vinegar.
  PK.CKW.6 (Science): Acquires knowledge about the physical properties of the world.
- Melt in the Sun: Place a variety of items in a muffin tin or in several small bowls or containers. Select some items that will melt when left in the sun and some that will not. Items that might melt in the sun include crayons, ice cubes and marshmallows. Ask children how long they think it would take for the items to melt. An hour? A day? Why?
  PK.CKW.6 (Science): Acquires knowledge about the physical properties of the world.
- Does it Change? Provide an assortment of materials for children to try to mix together such as oil and vinegar and flour and water. Invite children to predict what will happen when they combine the materials. Once they mix materials, ask them to reflect on their predictions and what occurs. Do the materials change? How?
  PK.CKW.6 (Science): Acquires knowledge about the physical properties of the world.
- Seed/Plant Match: Supply a variety of seeds as well as pictures of what the seed will look like as a plant. Invite children to match the seeds to the correct plant and talk about how the seed will grow and change. If possible, plant a few of the seeds and observe how they grow.
  PK.CKW.5 (Science): Observes and describes characteristics of living things.

PK.CKW.4 (Science): Observes and describes characteristics of earth and space.

- Butterfly Wings: Create butterfly wings with the children using tag board, paint, markers and/or other decorations. Encourage children to talk about their unique designs. Children can wear them on their backs and pretend they are butterflies, using string and tape to create shoulder straps. Talk about metamorphosis and how butterflies might feel about their wings. Children can later wear their wings as they dance in the Music and Movement area or as they write a butterfly story in the Writing Area.
  PK.CKW.5 (Science): Observes and describes characteristics of living things.
- Sculpture: Invite children to use recycled materials such as boxes and containers to create sculptures. Supply tape or glue to secure the materials together. As children work talk about how the individual items are transformed into something new by the children.
  PK.CKW.2 (Technology): Explores and uses various types of tools appropriately.
  √ Opportunity for Assessment
  What does the child construct from the recycled materials? What tools does s/he use?
- Color Mixing with Paint: Supply red, yellow and blue paint and invite children to explore coloring mixing and how the colors can change into new colors. You can do this activity with only black and white paint, or add black and white paint as an extension of this activity. After these paintings dry, place them in the Science Area and children can record their observations or chart what they discovered in their Science journals.
  PK.ATL.4 Exhibits curiosity, interest and willingness in learning new things and having new experiences.
- ❸Transform This Challenge: Supply various objects such as recycled materials and challenge children to select one and transform it into something new. Allow children to use an assortment of art materials such as recycled materials, collage materials, markers, paint, glue, etc. to transform the object they select. Talk with the children about what
- Kaleidoscope: If available, provide kaleidoscopes for children to explore. Encourage them to note the changes they see and consider how these changes occur.
  PK.ATL.1 Actively and confidently engages in play as a means of exploration and learning.
- Metamorphosis: Supply pictures of various insects or animals that experience metamorphosis such as butterflies and toads and invite children to sequence the pictures. Talk with them about the changes they notice in the pictures. Use the words *metamorphosis, pupa, grow, change,* and *life cycle* frequently throughout the activity. If possible, observe live animals by bringing them into the classroom or visiting pet stores or other locations where they might have these animals. When bringing animals into the classroom, you must be in compliance with all requirements of your licensing agency.
  PK.CKW.5 (Science): Observes and describes characteristics of living things.
- Chameleon: Share with children that a chameleon is an animal that can change the color of its skin. Chameleons change their coloring to communicate with other chameleons and sometimes change their color to blend into their surroundings or camouflage themselves. Trace a chameleon onto a clear surface (like an overhead projector sheet) and invite the children to place it in various places in the classroom to mimic how chameleons can change the color of their skin. Children can generate ideas about why the chameleon might change its color in each area. Use the word *camouflage* frequently throughout this activity.
  PK.CKW.5 (Science): Observes and describes characteristics of living things.
- Class Pet: If you have a class pet, invite children to reflect on the way the pet has grown or changed this year. Children can write or draw about their observations and reflections.
  PK.CKW.5 (Science): Observes and describes characteristics of living things.
- Reintroduce Ramp Races: Have children create a variety of ramps and use different vehicles to race, predicting which one will go down the

the original item was and what they have transformed it into as well as how they transformed the object. When finished, children can write about how they transformed the object in the Writing Area to share with others.
PK.ATL.3 Approaches tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.

- Weaving: Tie multiple pieces of strong across a hula hoop to create a loom and invite children to use various pieces of ribbon or yarn to weave over and under the string. Discuss how the individual ribbons were transformed into something new. This can also be done on a smaller scale using a frame made from craft sticks and pipe cleaners or similar materials.
PK.ATL.3 Approaches tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.
- Reintroduce Paper Plate Emotions: Cut paper plates in half, give children half of a plate and invite them to draw a mouth on the plate expressing an emotion (i.e. a smile for happy, frown for sad) on one side then turn the plate over and draw another mouth expressing a different emotion on the back. Attach a Popsicle stick to the bottom of the plate for children to hold and provide a mirror for children to use as they hold the emotion mask over their own mouths (Unit 3: All About Us).
  - Δ After looking at themselves with one expression ask children to turn the plate around and look at themselves with the other expression. Use this as an opportunity to start a discussion about experiencing emotions and how and why emotions can change, including how actions and words can have an effect on other people's emotions.
  PK.SED.2 Regulates his/her responses to needs, feelings and events.
- Suggested Text: Pete the Cat: I Love My White Shoes by Eric Litwin. Provide white paper and invite children to use it to create Pete's white shoes. After children have created the shoes invite them to add various colors to the shoes. Ask them how Pete got each color on his shoe and record their responses.

fastest and why. Chart their responses and try their suggestions (Unit 5: Transportation).
  - Δ Select one vehicle to go down the ramp. Time how long it takes for the vehicle to make it down the ramp, record the answer and then ask the children to consider how they can change the amount of time it takes for the vehicle to go down the ramp. What can they change to make it take longer for the vehicle to make it down the ramp? What can they change to make it take less time?
  PK.CKW.3 (Science): Generates explanations and communicates conclusions regarding experiments and explorations.
- Reintroduce Class Plant: Pick seeds that grow quickly, such as lima beans, to plant in the classroom. Create a class chart of predictions on how long it will take for the seeds to grow. Invite the children to measure the plant growth periodically and record the results. You should always be certain that plants are not poisonous, pose no harm to children and are maintained safely. In addition, you should be sure that children are not allergic to any of the plants in the classroom.
  - Δ As the plant grows note the visible changes that occur and invite children to record their observations through drawing or emergent writing.
  PK.CKW.3 (Science): Generates explanations and communicates conclusions regarding experiments and explorations.
- ❹Sugar Cube Tower Challenge: Fill a pan or tray with about ½ inch of water. Challenge children to use sugar cubes to build a tower in the tray. How many cubes can they use before the cubes dissolve? To see the changes that occur throughout the activity more clearly, use food coloring to color the water.
PK.CKW.3 Generates explanations and communicates conclusions regarding experiments and explorations.
- Transformation Journal: Provide a journal for children to use as a place to record changes they notice in materials they observe in the Science Center. Ideas for observation include melting ice, combining baking soda and vinegar, butterfly metamorphosis, etc. Journals can be made by stapling blank, unlined sheets of paper together. Notice

	transformation words children use throughout this experience (i.e. *bigger, combine, darker, lighter, metamorphosis, smaller* and *state)* and expand on these words with the children. *PK.CKW.2 (Science): Tests predictions through exploration and experimentation.* **√ Opportunity for Assessment** What data does the child record through the use of his/her journal? Do they organize their observations in any way? • Suggested Text: Caterpillar to Butterfly by Laura Marsh. Provide caterpillars and invite the children to observe them as they change from caterpillars to butterflies. Refer them to Caterpillar to Butterfly by Laura Marsh as they observe to find answers to any questions they have.
Toys and Games/Math Manipulatives • Critical thinking questions/statements: I notice that you ___; what do you notice? What happened when you ___? Why do you think that happened? Tell me about ___. How do you know? If I want to ___, what should I do? Tell me why. • Butterfly Wing Symmetry: Invite children to look carefully at butterfly wings and note how the designs on the wings are symmetric, or mirror each other. Was the butterfly symmetrical when they were a caterpillar? Invite children to create symmetric designs for butterfly wings by drawing a thick line down the middle of a piece of paper and inviting children to use pattern blocks to create symmetrical designs on each side of the line. Talk about the shapes children are using and where they place them on the paper. *PK.CKW.1 (Geometry): Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as top, bottom, up, down, in front of, behind, over, under and next to.*	**Sand and Water/Sensory** *There should always be materials available in a sensory table that allow children to dig, scoop, pour, fill containers, and experiment with the sand/water. Children should wash their hands before and after using the Sand and Water/Sensory table.* • Critical thinking questions/statements: What happens when ___? How do you think that works? How could you change that? What does that remind you of? What would happen if ___? Tell me more. • Paper Making: FOUNDATIONAL LEARNING EXPERIENCE SEE PAGE 46 FOR LESSON PLAN: Fill the sensory table with ripped or shredded paper. Most of the paper should be previously ripped or shredded but children can continue to rip the paper in the table. Add water to the paper and invite children to rip the paper and to scoop, mix, pour and mash until a mush, or pulp, is formed. If available, use a blender to create a finer pulp. Cover a mesh screen with pulp and allow the water to drain from the pulp through the screen. Use a sponge to press out additional water. Place a piece of white felt or cloth on top of the pulp to press out any remaining water. Leave the felt on the pulp then turn

- Addition: Tape two cardboard tubes diagonally onto a wall facing each other. Place a basket or container below the tubes so that when items are dropped into the tubes they will both fall into the basket. Drop cotton balls or small colored pom-poms into one tube, then into the other tube, saying how many you put in each side and then how many there are in the basket (all together). For example, "Two on one side and two more on the other side made four in the basket.") Talk with children about how adding items together changes the quantity. Highlight the use of the word *more* throughout the activity. Also consider adding paper and writing utensils and inviting children to write the numbers or number sentences they create.
  PK.*CKW.1 (Operations and Algebraic Thinking): Demonstrate an understanding of addition and subtraction by using objects, fingers and responding to practical situations (e.g. if we have 3 apples and add 2 more, how many apples do we have all together?).*
  √ Opportunity for Assessment
  What does the child understand about addition?
- Floor puzzles: Invite children to assemble puzzles, including large floor puzzles if available, and discuss how assembling the pieces together transforms the pieces from many small designs or pictures into a larger picture.
  PK.ALT.4 Exhibits curiosity, interest and willingness in learning new things and having new experiences.
- Reintroduce Light Table: Supply translucent plastic drinking straws in a variety of colors as well as small balls of playdough or pencil grips. Invite children to use the straws to create shapes or build structures with the straws. The playdough or pencil grips can be used to secure the shapes at the angles (Unit 6: Light).

  Δ After children have created a shape ask them what they can do to transform the shape into a new shape. As they explore this question talk to them about the properties of the shapes (e.g. "First you created a square. You used four straws, one for each side of the square. Now you took away one straw and put the sides back together and transformed the square into a triangle!)

the screen over and place on a flat surface. The wet paper should fall off the screen and onto the felt. Place the wet paper in a sunny place (if possible) to dry. It will take about 24 hours for the paper to dry. Talk with children about the way materials can change and the role they play in changing materials and objects. Use words such as *purpose, repurpose* and *recycle* frequently throughout the activity.
PK.CKW.4 (Science): Observes and describes characteristics of earth and space.

- Rain: Add plastic cups with holes in the bottom to the water in the sensory table. Invite children to fill the cups with water then lift them out of the water and hold them over the table to make rain. Talk with the children about changes in weather and the changes that happen when it rains (objects get wet, dirt turns to mud, emotions may change, etc.).
  PK.CKW.4 (Science): Observes and describes characteristics of earth and space.
- Weaving: Secure several pieces of string across an additional sensory bin to create a loom. Invite children to weave various pieces of ribbon, yarn, string, etc. over and under the string to create a weaving. Discuss how the children transformed the individual pieces into something new.
  PK.ATL.3 Approaches tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.
- Dirt to Mud: Ask children to predict how much water it will take to turn a container of dirt into mud. Record and test their predictions by counting the number of units (drops/cups/etc.) of water added to the dirt to make mud. Consider charting or graphing the results.
  PK.CKW.1 (Counting and Cardinality): Count to 20.
  √ Opportunity for Assessment
  How many units is the child able to count?
- Chalk Mush: Add pieces of sidewalk chalk to a small amount of water in the sensory table or an additional sensory bin. Allow the chalk to soak in the water before the children are invited to play. Supply potato mashers and invite the children to use them to change the pieces of chalk into mush to play with in the table. This is a good way to repurpose small pieces of chalk.

PK.CKW.2 (Geometry): Create and build shapes from components (e.g. sticks and clay balls). • ❺Cup Challenge: Supply a large amount of plastic cups. Challenge children to see how high they can build, balancing the cups in different ways. Can they make a tower taller than they are? Can they make a tower as tall as a teacher? *PK.ATL.2 Actively engages in problem solving.* • Suggested Text: The Curious Garden by Peter Brown. Talk with the children about how the garden in the book changed the city. Invite them to use small blocks and manipulatives to build their own garden. If the children planted a window garden in Unit 8: Plants, discuss how it may have changed your classroom.	*PK.CKW.6 (Science): Acquires knowledge about the physical properties of the world.* • ❻Keep the Boat Afloat Challenge: Provide a small toy boat and a number of small manipulatives or items such as pennies or small blocks. Challenge children to see how many items they can place on the boat before the boat sinks. *PK.CKW.1 (Counting and Cardinality): Count to 20.* • Reintroduce Explore Ice: Add ice cubes to the sensory table. Invite children to explore the ice (Unit 7: Water). Δ Add pipettes and cups of warm (not hot) colored water. Have children explore the ice, noting the changes in the ice as they squirt the colored water on it. Additionally they can explore what happens to the colored water as the ice melts. Discuss these changes with the children as they investigate. *PK.CKW.6 (Science): Acquires knowledge about the physical properties of the world.* • Suggested Text: Water Can Be… by Laura Purdie Salas. Ask children about the many things water can be as they play with water in the sensory table. Consider placing pictures from this book on the walls near the Sand and Water/Sensory table.
Library • Critical thinking questions/statements: Tell me about that book. What do you like about it? What is your favorite part of this book? Why? Would you recommend it to a friend? Why or why not? • Add a selection of books from the Supporting Text List in Section V for children to access and independently explore. After children have the opportunity to read a variety of transformation related books invite them to compare and contrast two of them. *PK.CLL.9 (Reading Standards for Literature): With prompting and support, students will compare and contrast two stories relating to the same topic.* • Felt Board Stories: Create felt pieces that relate to one of the transformation books the class enjoys most. Invite children to use these pieces to retell the story.	**Cooking and Mixing (as needed)** • Critical thinking questions/statements: Why do you think we are adding ___? What would happen if ___? What do you notice as we do this? How do you think it will taste? How does it smell? How does it feel? What does it look like? What does this remind you of? • Cooking Experience: Supply child friendly cookbooks for children to explore. Invite them to select a recipe to make in the classroom together. Read the recipes with the children and talk about how the recipe ingredients change throughout the cooking experience. For example, "When combined the milk and flour transformed into mush!" *PK.CKW.6 (Science): Acquires knowledge about the physical properties of the world.*

PK.CLL.2 (Reading Standards for Literature): With prompting and support, retell familiar stories.

√ Opportunity for Assessment

What information is the child able to recall and retell from the story?

- Puppets: Add puppets to the library and invite children to use them to read or act out some of their favorite transformation books.
  PK.CLL.2 (Reading Standards for Literature): With prompting and support, retell familiar stories.
- Reintroduce Round Trip by Ann Jonas: Revisit this book with the children (Unit 6: Light).

  Δ After reading the book with the children, look very carefully at a page or two with the children and talk about how the pictures transform when you turn the book over.
  PK.CLL.3 (Approaches to Communication): Demonstrates that s/he understand what they observe.

- ❼Orange Juice Challenge: Supply fresh oranges and challenge the children to figure out how to turn the oranges into orange juice. Guide them through the experience with open-ended questions. This activity could be implemented over the course of two days. On the first day ask children to plan how they will turn the oranges into juice, including making a list of what they might need. On the second day supply some of the materials they will need in order to accomplish this challenge. When children are ready to drink their orange juice talk with them about making healthy food choices.
  PK.PDH.8 Demonstrates awareness and understanding of healthy habits.
- Popcorn: If possible, make popcorn with the children. Show them the popcorn kernels in advance and talk about how the kernels change when heated.
  PK.CKW.6 (Science): Acquires knowledge about the physical properties of the world.
- Suggested Text: From Milk to Ice Cream by Stacy Taus-Bolstad. After reading this book with the children make ice cream together in the classroom. See Section XI: Appendices for sample recipe.

Notes:

- Be mindful of children's food intolerances and allergies by connecting with families before you do cooking activities and explicitly teaching children how being aware of allergies keeps us safe.
- Children must always wash hands before and after cooking experiences.
  PK.PDH.7 Demonstrates personal care and hygiene skills.
- Snacks and meals must be of adequate nutritional value. When providing snacks and meals, supplement with other components of a healthy meal/snack according to appropriate meal guidelines in order to make sure children's nutritional needs are met.

Computer/Technology

Content should be free of product placement/advertising. Children are not to use computers or other devices with screens more than 15 minutes per day, with a maximum of 30 minutes per week. Exceptions to this limit may be made for children with disabilities who require assistive computer technology as outlined in their

Outdoors/Playground

- Critical thinking questions/statements: I saw you do ___; what will you do next? If you try ___, what do you notice? How did you do ___?

Individualized Education Program. Prescreen images and videos to make sure they are appropriate for children and not frightening or explicit. Do not use personal devices and ensure that you have signed permission before taking photographs of children.

- Dance: Pull up short video clips of dances (e.g. ballet or folk dances) that show how people may change the way they move their bodies and dance depending on how the music changes.
  PK.CKW.8 (The Arts): Responds and reacts to dance and creative movement.
  √ Opportunity for Assessment
  How does the child interpret and react to the dancing? What part of the dance did s/he enjoy most? Why?
- Butterfly Metamorphosis: Use a search engine to pull up images and information about butterfly metamorphosis. Share the information and pictures with a small group of children and discuss. Also consider investigating insect and amphibian metamorphosis (i.e. ladybugs, toads) with the children in this manner.
  PK.CLL.10 (Reading Standards for Informational Text): With prompting and support, actively engage in group reading activities with purpose and understanding.
- Butterfly Wing Symmetry: Use a search engine to pull up images of different kinds of butterflies. Discuss how the designs on the wings are symmetrical by encouraging children to notice the placement of the designs on each wing. Use these images as inspiration for the butterfly wing activity in the Art Center.
  PK.CKW.1 (Geometry): Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as top, bottom, up, down, in front of, behind, over, under and next to.
- Kindergarten: For children who will be attending kindergarten at a different location pull up pictures of the school(s) these children will be attending. Talk with the children about the images and discuss the ways the new school looks the same and different from the building where they attend pre-K.

- Changes Due to Weather: Ask children how different types of weather may change things in the outdoor space children use at pre-K. For example, if there is a puddle in the space ask children to consider how the puddle might change if it becomes very cold outside or if it becomes very sunny and warm. Alternatively ask children to consider how everything in the outdoor space can change if it rains, snows, etc.
  PK.CKW.4 (Science): Observes and describes characteristics of earth and space.
- Squish and Stretch: Draw a set of four lines on the ground with sidewalk chalk, each about twelve inches apart. Draw one set of lines for each child who chooses to participate. Ask children to change the shape of their bodies so they are covering, spanning or in between a specified number of lines. Children can stand and do the movements, or sit or lie down (be sure the ground is free of dangerous objects). For example, "Stretch your body so it covers four lines." After children complete this task ask them to change their position so they cover a different number of lines such as, "Now change your position and squish your body together so you fit in between two lines." Repeat with other directions and talk about how children change their position and shape each time you give new directions.
  PK.PDH.2 Uses sensory information to plan and carry out movements.
- ❽ Don't Ring the Bells Challenge: Hang small bells at a low level on the playground or outside space and challenge children to move their bodies so they can go under the bells without ringing them. Also consider hanging bells in other places such as tying a few to the inside of a hula hoop, hanging the hula hoop then inviting children to climb through the hoop without ringing the bells. Talk about the ways children move and change their bodies to complete this challenge as well as things that should not change such as the position of the bells.
  CK.PDH.3 Demonstrates coordination and control of large muscles.
- Statues: Invite children to use their bodies to create statues. Use an auditory signal such as a hand clap or bell to change their positions and create a new statue.
  PK.PDH.6 Engages in a variety of physical fitness activities.

PK.CKW.4 (Social Studies): Develops an understanding of how people and things change over time and how to relate past events to their present and future activities. • Optical Illusions: Use a search engine to pull up optical illusions for children to observe and consider how one picture can appear to change or look like multiple images. Consider printing some of the optical illusions, hanging in the art area and inviting children to create optical illusions of their own. • Edit Photos: If an iPad or similar tool is available take a picture then use the editing feature to change the photo. *PK.CKW.5 (Technology): Uses the knowledge of technology to increase learning.*	• Change Your Speed: Invite children to move around the playground at various speeds, using an auditory signal like hand clapping or tapping a triangle to suggest how fast or slow they should be moving. Ask children to pause throughout the activity and place a hand over their heart to feel their heartbeat. Encourage them to note changes in their heartbeat and breathing based on the type of movement they are doing. *PK.PDH.6 Engages in a variety of physical fitness activities.* • Reintroduce Fall Leaves: Draw a tree trunk and branches on heavy paper and bring outside; provide children with squirt bottles filled with water the color of fall leaves. Invite children to spray the water to represent the leaves (Unit 2: My Five Senses). ∆ Draw another large tree trunk and branches on heavy paper as well. Supply materials such as a spray bottle with green water or green paper, scissors and tape for children to use to make the new tree look like the trees they see outside now. Also consider providing additional tree trunks and branches for children to depict trees in the winter and spring. Children can dip a finger into paint to add buds to a spring tree or cotton balls and glue to create a snowy tree in winter. Talk with children about the changes in seasons and what changes occur in trees throughout the year. Later, in the Writing Center, children can add labels such as the names of the seasons. *PK.CKW.4 (Science): Observes and describes characteristics of earth and space.* • Suggested Text: Day and Night by Shira Evans. After reading this book together, encourage children to consider what changes from day to night in their outdoor play space.

Writing	Music and Movement
• Critical thinking questions/statements: I notice that you ___; that reminds me of ___. What if you try ___? • Compound Words: Supply pictures of things that can be combined to form compound words such as "peanut" and "butter," "cow" and "boy" and "tooth" and "brush" as well as pictures of the compound word. Talk with children about how words and meanings of words can change when they are put together and invite them to explore the pictures and compound words. *PK.CLL.4 (Language Standards): Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on pre-kindergarten reading and content.* • Magnifying Glasses: Provide two sets of letters- one set that is very, very small and the other set much larger. Invite children to use magnifying glasses to look at the small letters and then find the matching larger letter. Talk about how the magnifying glasses change the size of the small letters so you can see them. Use the words *smaller* and *bigger* frequently throughout the activity. *PK.CKW.2 (Technology): Explores and uses various types of tools appropriately.* • Transformation Stories: Encourage children to write a story about something or someone who experiences a change. Ask how the character felt before, during and after the change. *PK.CKW.4 (Social Studies): Develops an understanding of how people and things change over time and how to relate past events to their present and future activities.* • Invisible Ink: Supply a white crayon as well as white paper and a highlighter. Invite children to write with the white crayon on the white paper. Encourage them to press hard with the crayon. After children have created a picture or message with the white crayon invite them to color over their work with a highlighter or watercolor paint. What happens? What changes do they notice? *PK.CKW.6 (Science): Acquires knowledge about the physical properties of the world.*	• Critical thinking questions/statements: I see you moving like this. I heard you ___ / saw you ___; tell me about that. Let's try playing the music loud (or soft, fast, slow). Can you try this? How does this music make you feel? Have you heard music like this before? Where? • Body Letters: Invite children to use their bodies to create letters of the alphabet. Start with one letter then invite them to change their position to create a different letter. Be sure to have letters available for children to reference throughout the activity. *PK.PDH.3 Demonstrates coordination and control of large muscles.* • Metamorphosis: Supply pictures of each phase of butterfly metamorphosis. Invite children to look at the pictures and use their bodies to represent each phase. This could be done as a series of poses or as a dance. Use words such as *butterfly, caterpillar, chrysalis, egg, life cycle, metamorphosis and pupa* frequently throughout the activity. *PK.CKW.7 (The Arts): Expresses what s/he knows, thinks, feels and believes through dance and creative movement.* • Music From Around the World: Share music from various cultures around the world or invite families to share music their family enjoys. Play the music for the children and invite them to think about how the music makes them feel and invite them to dance accordingly. *PK.CKW.9 (The Arts): Expresses an understanding of artistic difference among cultures.* • Transformation Movement: Suggest various transformation related words (e.g. grow, shrink, stretch) and invite children to use their bodies to represent these words. This could be done as a serious of poses or as a dance. *PK.CKW.7 (The Arts): Expresses what s/he knows, thinks, feels and believes through dance and creative movement.* • Audience: Invite children to be the audience as other children give Transformation movement performances based on the activities suggested in this section. Discuss the role of an audience member prior to implementing this activity and consider inviting children to create

- Recipe Books: Invite children to reflect on the cooking and mixing experiences they have had in the classroom this year. Invite them to explore cookbooks and recipes and then create recipes of their own. Children can talk about how the ingredients they use will change throughout the cooking experience. If appropriate, have children make one of the recipes.
  PK.CLL.10 (Reading Standards for Informational Text): With prompting and support, actively engage in group reading activities with purpose and understanding.
- Reintroduce Letter Blocks: Supply small letter blocks. Assist children in exploring the sounds of the letters and invite children to use the blocks to create words or names such as their own names, the names of their classmates or the names of people in their families (Unit 9: Babies).
  - Δ Invite children to create combinations of blocks and explore how individual letter sounds change when letters are combined. Help children explore the sounds of letters and the sounds of letter combinations. If children are ready invite them to try to spell simple words.
    PK.CLL2 (*Language Standards*): Demonstrates command of the conventions of standard English grammar and usage when writing or speaking.
    √ Opportunity for Assessment
    What understanding of sound-letter relationships does the child demonstrate as s/he engages in this activity?
- Change a Letter: Choose a few simple words that have an initial sound that can be changed to create a new word, for example *hat* and *can*. On one half of an egg, write the last two letters of the word. On the other half, write a few letters so that when rotated, new words will be created (for example *cat*, *mat* and *bat*). Encourage children who are interested in letters and the sounds they make to rotate the eggs to make new words.
  PK.CLL.2 (Language Standards): Demonstrates command of the conventions of standard English grammar and usage when writing or speaking.

materials such as tickets and programs for the performance. *PK.CKW.6 (The Arts): Responds and reacts to theater and drama presentations.*

- Audience Reviews: After children are audience members at their peers' Transformation movement performances invite them to share the things they liked best about the performance. Record their responses and hang them in the Music and Movement Area.
  PK.CKW.8 (The Arts): Responds and reacts to dance and creative movement.
- Reintroduce Instruments: Supply different types of basic instruments such as drums, bells, shakers, scarves and music as well as space to move and dance (Unit 1: Welcome to Pre-K).
  - Δ Invite children to explore the ways they can change the music they make with the instruments such as making it louder, softer, faster or slower.
    PK.CKW.3 Expresses oneself by engaging in musical activities.
- ⑩ Instrument Challenge: Supply various recycled materials such as cardboard boxes, plastic cups, empty and clean food containers, small collage materials such as buttons, beads, etc. and tape or glue. Challenge children to change these materials into instruments.
  PK.ATL.2 Actively engages in problem solving.
- Suggested Text: Color Dance by Ann Jonas. Supply colored scarves and invite children to use them to create their own color dance.

• ❾ Letter Challenge: Provide various materials such as twigs, straws, string, chopsticks, tongue depressors, etc. and invite children to transform these materials into letters. Challenge them to see how many letters they can create. Be sure to have printed letters available for children to reference throughout the activity. *PK.ATL.3 Approaches tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.* • Suggested Text: Before After by Matthias Arégui and Anne-Margot Ramstein. Choose (or have children choose) a page (or pages) from this wordless picture book and ask children to consider how the items in the pictures on the page(s) have changed or what might happen next. Ask them what words they think would be good to add to the pictures. Write down their ideas or they can try writing on their own.	

V. Supporting Texts

Books are essential to a well-planned unit and ground the learning experiences for children. Engage children with books throughout the day. Read alouds can occur in large group and small group as well as in centers. Books can be incorporated throughout the room and enhance children's learning through play. Some books are read repeatedly throughout the unit; these are foundational texts. Some books will be read only once or twice throughout the unit; these are supporting texts. Supporting texts complement focus questions and areas of interest or may be related to the essential question or enduring understandings of the unit. Select the books that seem most relevant to your classroom community. Choose a balance between informational texts and literature to help children understand the scientific content of this unit and help them connect to this increasingly abstract concept. The following list is not exhaustive and can be supplemented by similar books. Not only can these books be read aloud both formally and informally, but children should also be able to access and read these books on their own. Allowing children access to classroom books encourages children to display emergent reading behaviors and address *PK.CLL.4 (Reading Standards: Foundational Skills): Displays emergent reading behaviors with purpose and understanding (e.g., pretend reading).*

**Books with an asterisk are also available in languages other than English.*

Another Important Book by Margaret Wise Brown: Discover all the important things about being Six, Five, Four, Three, One, Two, and you.
An Awesome Book by Dallas Clayton: A little book about dreaming big.
Bear's Loose Tooth by Karma Wilson: Bear and his friends are munching on their lunch when all of sudden Bear feels something wiggling and wobbling in his mouth.
Before After by Matthias Arégui and Anne-Margot Ramstein: A wordless look at the concept of before and after from very small to complex.
Ben Says Goodbye by Sarah Ellis: When Ben's best friend moves away Ben decides that he will move, too.
Big Ernie's New Home: A Story for Young Children Who Are Moving by Teresa Martin: As Big Ernie gradually discovers familiar comforts and exciting adventures in his new home, young readers may be encouraged to do the same in theirs.
Boomer's Big Day by Constance W. McGeorge: There's definitely something unusual going on. The humans aren't rushing to work today and there are people here packing everything into boxes!
*Caterpillar to Butterfly by Laura Marsh: An up-close look at exactly how a caterpillar becomes a butterfly.
Changes, Changes by Pat Hutchins: The little wooden couple are happy in their building-block house -- until it catches fire. The solution? They transform the house into a fire engine! But then there's so much water that they have to build a boat...
*Charlie Needs a Cloak by Tomie dePaola: A shepherd shears his sheep, cards and spins the wool, weaves and dyes the cloth, and sews a new red cloak.
Color Dance by Ann Jonas: Watch as the children create a living kaleidoscope.
The Curious Garden by Peter Brown: Liam discovers a struggling garden and decides to take care of it.
Day and Night by Shira Evans: During the day, the sun shines, birds tweet, and bees buzz. Earth is awake! But what happens at night?
Double Happiness by Nancy Tupper Ling: The difficulty of transition and celebration of the ways in which love and family provide strength.
First the Egg by Laura Vaccaro Seeger: Which came first? The chicken or the egg?
Froodle by Antoinette Portis: Little Brown Bird's new tune shakes up the neighborhood.

From Milk to Ice Cream by Stacy Taus-Bolstad: How does milk turn into frosty ice cream?
*Go Away, Big Green Monster! by Ed Emberley: Watch the Big Green Monster grow and then when you're ready to show him who's in charge turn the remaining pages and watch him disappear!
A Good Day by Kevin Henkes: What can turn a bad day into a good day? You decide.
The Grasshopper and the Ants by Jerry Pinkney: Things change; don't put off for tomorrow what you can do today.
*Growing Vegetable Soup by Lois Ehlert: A father and child grow a garden together then use the harvest to make the best soup ever.
*Harold and the Purple Crayon by Crocket Johnson: Harold draws himself a world of wonder and amazement.
I Like to Be Little by Charlotte Zolotow: A little girl describes all the things she likes that grown-ups usually do not.
*I'm a Caterpillar by Jean Marzollo: Explore how a caterpillar turns into a butterfly from a caterpillar's point of view.
In the Small, Small Pond by Denise Fleming: A frog's-eye view of life in a pond throughout the seasons.
It Looked Like Spilt Milk by Charles G. Shaw: The white shape changes on every page; with a little imagination, something ordinary can become something extraordinary.
I Used to Be Afraid by Laura Vaccaro Seeger: Things that may seem scary at first can become magical!
Kindergarten, Here I Come! by David Steinberg: A poem to celebrate each kindergarten milestone.
*Kitten's First Full Moon by Kevin Henkes: Kitten thinks the moon is a bowl of milk.
*The Kissing Hand by Audrey Penn: Chester's mom helps him feel safe and secure and remember how much she loves him.
*Leo the Late Bloomer by Robert Kraus: Leo wonders if he'll ever catch up to his friends.
Little Blue and Little Yellow: A Story for Pippo and Ann and Other Children by Leo Lionni: When little blue and little yellow hug they become green- but where did blue and yellow go?
*The Little Engine That Could by Watty Piper: Even though she is small, the blue train tries her best to bring the toys to the children on the other side of the hill.
The Little Gardener by Emily Hughes: The little gardener worked very hard but he was just too little (or at least the thought he was).
*The Little House by Virginia Lee Burton: The changing world lands the little house in the middle of the city.
*The New Small Person by Lauren Child: Everything in Elmore's life changes when a new little person comes along.
The Night World by Mordicai Gerstein: Everyone in the house is sleeping, but outside, the night world is wide-awake.
Mix It Up! by Herve Tullet: Use your hand to mix up the colors.
The Moon Book by Gail Gibbons: Facts about the moon.
*Mouse Paint by Ellen Stoll Walsh: One day three white mice discover three jars of paint.
*Oh The Places You'll Go! by Dr. Seuss: Find the success that lies within through all of life's ups and downs.
Pete the Cat: I Love My White Shoes by Eric Litwin: Discover how Pete's shoes change as he walks down the street.
Our Seasons by Grace Lin & Ranida T. Mckneally: Find out why we have seasons and how they vary around the world.
Recycle: A Handbook for Kids by Gail Gibbons: The process of recycling from start to finish.
*So Close by Natalia Colombo: There are opportunities for friendship all around us.
Titch by Pat Hutchins: Titch is little and so is everything he has, until one day his little seed grows much bigger than everything else.
Trees to Paper by Lisa M. Herrington: How is paper made?

Watching the Seasons by Edana Eckart: Weather changes from day to day and over the seasons, and there are ways by which weather can be measured.
Water Is Water by Miranda Paul: Drip. Sip. Pour me a cup. Water is water unless....
*We Have a Baby by Cathryn Falwell: The important things the family can do for a new baby and the love the baby will give in return.
The Wonderful Things You Will Be by Emily Winfield Martin: A celebration of potential.
Wax to Crayons by Inez Snyder: A start to finish look at how things are made.
Water Can Be... by Laura Purdie Salas: Explore some of the many roles of water.
Where Do Recyclable Materials Go? Read, Think, Recycle by Sabbithry Persad: When their dog, Bubbles, chases after the recycling truck, Tiana and her family set off on a search to the Materials Recovery Facility and learn about recycling along the way.
The Whisper by Pamela Zagarenski: We each bring something different to the same story.
The Year Comes Round: Haiku Through the Seasons by Sid Farrar: Twelve nature-themed haiku take the reader from January to December.

VI. Sample Weekly Plan

UNIT TITLE: Transformation
WEEK ONE

Essential Question: What is transformation and how do things change?

Focus Question: What changes around me?

Focus Vocabulary: appearance, change, date, feelings, larger, longer, narrower, objects, state, shorter, seasons, transform, transition, weather

	Monday	Tuesday	Wednesday	Thursday	Friday
Greeting Routine	Continue to supply a table with child-sized pencils, crayons or other writing tools, half sheets of paper or large chart paper, and a basket of name/picture cards for each child (laminated cards with each child's picture and first name, with the first letter in red). Remind children to sign in if necessary and continue to **encourage any mark** children make according to each child's needs, but be prepared to help children who are ready for additional challenges. As we approach the end of the year, some children may be able to write their name without referencing their name cards while others will still need this support. Continue observing children's writing and refer to the stages of prewriting (in Unit Three, "All About Us") to determine what to expect next and how to best support the continued development of the child. Consider giving children the opportunity to compare sign-in sheets from the beginning of the year with those from the end of the year and examine how their writing has changed. Sign in can be done as children arrive or later in the day. If children seem uninterested in signing in this way, consider encouraging them to write their names throughout their Center Time play. For example, children can add their own names to their artwork or create their own name cards to save their structures in the Block/Construction Area.				

	PK.CLL.1 (Language Standards): Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.				
Large Group Meeting (In order to reduce the amount of time children spend in large group and ensure that children have enough time to engage in meaningful play, teachers should think strategically about other whole group activities and whether they are essential to the day.)	Squiggle: Give each child a piece of string that is about 36 inches long. Tell them they can wiggle and squiggle and change the string a lot. Ask them to use their squiggly string to make a picture or design on the floor. Invite them to pair and share about what they created. After children share ask them to change their picture. Repeat according to children's interests. Talk with children about how they changed the shape of the string into many different things. *PK.ATL.3 Approaches tasks, activities and problems with creativity, imagination and/or willingness to try new experiences or activities.*	Foundational Text Read Aloud: Little Tree by Loren Long *PK.SED.7 Adapts to change*	"Feelings Change:" Read aloud the "Feelings Change" book the class created in the Literacy Small Group activity this week. Talk about children's feelings and the expressions used to illustrate them. *PK.SED.2 Regulates his/her responses to needs, feelings and events.*	Play short audio clips of a variety of music types. Invite children to dance, changing their movements to reflect the changes in the music and the way the music makes them feel. *PK.CKW.4 (The Arts): Responds and reacts during musical activities.*	Class discussion: Things around us that change. Reflect with children on the things they have experienced this week that change. Ask them to think of additional things that change. Chart their responses. *PK.CLL.1 (Speaking and Listening): With guidance and support, participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and large groups.*
BB Math Meeting					

See Teacher's Edition for Math Meeting Activities					
Foundational Text	Little Tree by Loren Long				
Supporting Text	First the Egg by Laura Vaccaro Seeger	A Good Day by Kevin Henkes	Wax to Crayons by Inez Snyder	Mouse Paint by Ellen Stoll Walsh	Froodle by Antoinette Portis
Small Groups Implement at least one of the two weekly Building Blocks small group activities and one of the other activities listed here as well. *Small groups can be implemented during Center Time or at another time during the day. Invite 2-4 children to participate at a time. Although children are typically excited about the opportunity to work closely with a teacher, children may decline the opportunity to participate. Each small group should	LITERACY SMALL GROUP: Feelings Change. Ask children to think about a time they experienced a difficult or uncomfortable emotion (nervous, sad, angry, etc.). What did they do about this emotion? How did they begin to feel better (from sad to happy or frustrated to calm)? What happened to help them feel better? Record their experiences by taking pictures of the students expressing the emotions or have them draw and/or write about the experience. Collate children's "feelings change" pages into a book. *PK.CKW. 4 (Social Studies): Develops an understanding of how*	See your Building Blocks Teacher's Edition for the weekly Small Group Activity. Group 1: Group 2: Group 3: Group 4: Group 5:	SMALL GROUP #3: Cooking Experience. Use a child friendly cookbook to find a recipe suitable for your classroom resources and children's interests and make the recipe together. Talk with the children about the changes that occur throughout this cooking experience. For example, "When combined, the milk and flour transformed into mush!" *PK.CKW.6 (Science): Acquires knowledge about the physical properties of the world.* Group 1: Group 2: Group 3:	See your Building Blocks Teacher's Edition for the weekly Small Group Activity. Group 1: Group 2: Group 3: Group 4: Group 5:	Catch-up Day: Use this as an opportunity to complete small groups with children you may have missed throughout the week. Children to work with today (initials):

not exceed 10 minutes in length. Work with a couple of groups per day and spend the remainder of the time engaging with children in the interest areas.	*people and things change over time and how to relate past events to their present and future activities.* Group 1: Group 2: Group 3: Group 4: Group 5:		Group 4: Group 5:		
Small Group Tips	*4 Quick Tips for Small Group:* • *Use exciting language and affect to describe the small group activity.* • *Use hands-on materials that children are encouraged to explore.* • *Preview small group activities in whole group.* • *Link the activity to children's previous experiences.* *If children still decline…* • *Have a private conversation with the child as s/he plays to understand why s/he did not want to join. Take that into consideration and adjust the small group materials to reflect the needs of the child.* • *Modify the small group activity so that you can do it with the materials that the child is using in the center of his/her choice.* • *Facilitate a conversation between the child and a friend who enjoyed the small group activity so that the hesitant child will be more likely to join.*				
Outdoors	See **Section IV,** Ideas for Learning Centers.				
Lunch	Talk with children about the way that food changes as it is prepared. Share examples from the children's lunches.				
Centers	See **Section IV,** Ideas for Learning Centers.				
Opportunities for differentiation and	(To be completed as needed by teachers.)				

integration of goals for children with IEPs	
Differentiation for children whose home language is a language other than English	(To be completed as needed by teachers.)

VII. Sample Student Work

Below are examples of student work from activities in this unit. Note the alignment to standards and the relationship to the focus question and PKFCC standard. Some examples may fit under more than one standard and/or focus question.

Example 1: Bridge Challenge

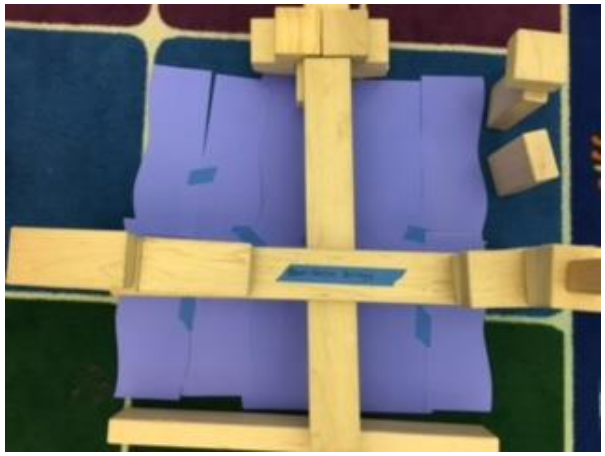
Activity Type: Centers

PKFCC Standard: *PK.ATL.2. Actively engages in problem solving.*

"Hmmm, that block is in the water but the bridge is only supposed to go over the water."

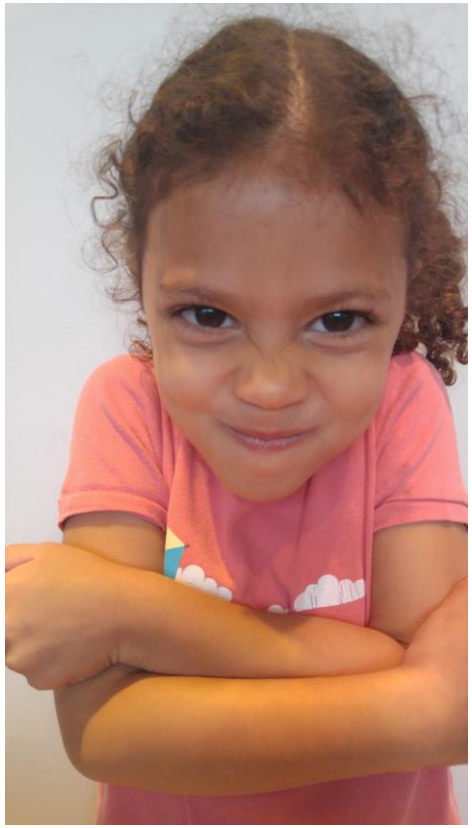
"Now the top block is going to fall in. Gotta try something different."

"Got it!"



"Ms. L kept making the river wider and wider since we are so good at making bridges. This one was really tough. We had to build supports on one side to make the bridge fit all the way across. It's called the River Water Bridge. We put the name in the middle."

Example 2: Feelings Change
Activity Type: Small Group
Focus Question: What things around me change?
PKFCC Standard: *PK.CKW. 4 (Social Studies): Develops an understanding of how people and things change over time and how to relate past events to their present and future activities.*



Sometimes I feel angry when someone pushed me.

I take a deep breath to feel better.

Sometimes I'm just happy. Everybody's my friend.
I just play!

VIII. Supporting Resources

Teacher Texts

The Curious Kid's Science Book by Asia Citro
Good Thinking! Fostering Children's Reasoning and Problem Solving oning and Problem Solving by Jessica Ick Whittaker
Getting Ready for Readiness: Helping Preschoolers Make the Transition to Kindergarten by Laura J. Colker
Physical Activity in Early Childhood: Setting the Stage for Lifelong Healthy Habits Parenting Series, April 2011

Teacher Websites

American Museum of Natural History Butterfly Conservatory
http://www.amnh.org/calendar/the-butterfly-conservatory
Optics4Kids: Optical Illusions
http://www.optics4kids.org/home/content/illusions/

Music

These are common preschool songs sung by teachers throughout New York City and the world. Where possible, tunes and lyrics are included. If you don't know the tune, you can make one up that works for you or chant the words to a beat. Disclaimer: the lyrics provided are only for use by classroom teachers and are provided for the specific, non-profit educational purpose of supporting interdisciplinary learning in your classroom.

Song Titles
I'm a Little Teapot
A Peanut Sat on a Railroad Track
Alice the Camel
Apples and Bananas
Baby Bumblebee
Bed in Summer
If All the Raindrops
Ten in a Bed
Shake My Sillies Out
Peanut Butter and Jelly
I Wonder if I'm Growing
The Story of my Feelings

Songs with Lyrics	
Hickory Dickory Dock Hickory dickory dock, The mouse ran up the clock. The clock struck one, The mouse ran down, Hickory dickory dock. Hickory dickory dock, The bird looked at the clock, The clock struck two, Away she flew, Hickory dickory dock.	*London Bridge* London Bridge is falling down, Falling down, falling down. London Bridge is falling down, My fair lady. Build it up with iron bars, Iron bars, iron bars, Build it up with iron bars, My fair lady. Iron bars will bend and break, Bend and break, bend and break,

Hickory dickory dock, The dog barked at the clock, The clock struck three, Fiddle-de-dee, Hickory dickory dock. Hickory dickory dock, The bear slept by the clock, The clock struck four, He ran out the door, Hickory dickory dock. Hickory dickory dock, The bee buzzed 'round the clock, The clock struck five, She went to her hive, Hickory dickory dock.	Iron bars will bend and break, My fair lady. Build it up with gold and silver, Gold and silver, gold and silver, Build it up with gold and silver, My fair lady.
Humpty Dumpty Humpty Dumpty sat on a wall Humpty Dumpty had a great fall All the King's horses And all the King's men Couldn't put Humpty together again	

IX: Inquiry and Critical Thinking Questions for Foundational Texts

Critical thinking skills are foundational to learning and educational success. These questions are based around Webb's Depth of Knowledge Wheel (http://schools.nyc.gov/NR/rdonlyres/522E69CC-02E3-4871-BC48-BB575AA49E27/0/WebbsDOK.pdf) which provides a vocabulary and critical thinking frame of reference when thinking about our children and how they engage with unit content. A **PKFCC** standard is also listed for each text. This standard addresses several of the questions provided for each book. Reread foundational texts throughout the unit, starting with Level 1 questions and adding more complex questions each time you read them.

Little Tree by Loren Long

PK.SED.1 Recognizes himself/herself as a unique individual having his/her own abilities, characteristics, feelings and interests.

Level 1: Recall

Why did Little Tree stay little when all of the other trees started to grow bigger?
Why did Little Tree finally decide to let go of his leaves?
What happened after Little Tree dropped his leaves?

Level 2: Skill/Concept

Why do you think Little Tree wanted to keep his leaves for so long?
Why do you think the animals in the forest tried to help Little Tree drop his leaves?
How do you think Little Tree felt about staying the same when all of the other trees were growing and changing?

Level 3: Strategic Thinking

If you were in the forest with Little Tree would you try to help him drop his leaves? Why or why not?
What do you think the other trees and the animals in the forest thought about Little Tree keeping his leaves and staying the same?

Level 4: Extended Thinking

If you were going to try to help Little Tree drop his leaves what would you do? Why?
Can you think of a time when the things around you were changing but you wanted them to stay the same? What did you do?
Tell a partner about a change that made you uncomfortable or a change that made you excited.

Joseph Had a Little Overcoat by Simms Taback

PK.CKW.4 (Science): Observes and describes characteristics of earth and space.

Level 1: Recall

How did Joseph change or reuse his overcoat?
What are some of the things Joseph made from his overcoat?
What did Joseph do when he lost his button?

Level 2: Skill/Concept

What was the biggest thing Joseph made from his overcoat?
What was the smallest thing Joseph made from his overcoat?
Why was each item Joseph made smaller than the item he made it from?

Level 3: Strategic Thinking

Joseph made a jacket, a vest, a scarf, a necktie, a handkerchief and a button. What are some other things Joseph could have made from his overcoat?
Joseph made things that he needed. Which item would be most helpful for you: a jacket, a vest, a scarf, a necktie, a handkerchief or a button? Why? Which item would be least helpful? Why?

Level 4: Extended Thinking

When Joseph lost his button he made a book about this overcoat and how he transformed it into many different items. Think of a time you transformed something old into something new. Tell a partner about what you did.
What could Joseph have transformed his button into if he hadn't lost it?
Joseph reused his overcoat many, many times. What are some materials you can reuse? What are some materials you can recycle?
How does reusing or recycling materials help take care of the earth?

The Very Hungry Caterpillar by Eric Carle

PK.CKW.5 Observes and describes characteristics of living things.

Note: In this book, the author uses the word cocoon instead of chrysalis. Most caterpillars do not build cocoons.
Cocoon: a covering usually made of silk which some insects make around themselves to protect them while they grow.
Chrysalis: a moth or butterfly at the stage of growth when it is turning into an adult and is enclosed in a hard case.

Level 1: Recall

What food did the caterpillar eat?
How did the caterpillar feel after he ate all week?
After the caterpillar ate and grew into a big, fat caterpillar he built a small house called a cocoon. What happened to the caterpillar when he was inside the cocoon?

Level 2: Skill/Concept

Why did the caterpillar eat so much food?
Why was the caterpillar so hungry?
Why do you think the caterpillar ate the green leaf on Sunday?

Level 3: Strategic Thinking

How can you tell if you are growing? What can you do to help you grow?
Why do you think the illustrator made a hole in each food that the caterpillar ate?

Level 4: Extended Thinking

How are you like the caterpillar?

How are you like the butterfly?
What are some other things that change like the caterpillar?
What are some other animals that change like the caterpillar?

What Do You Do With an Idea? by Kobi Yamada

PK.SED.1 Recognizes himself/herself as a unique individual having his/her own abilities, characteristics, feelings and interests.

Level 1: Recall

At the beginning of the book the boy walked away from the idea. Why did he do that? What did the idea do?
How did the boy take care of the idea?
Why did the boy decide to take care of the idea?
What happened to the idea when the boy began to take care of it?

Level 2: Skill/Concept

What is an idea?
Where do ideas come from?

Level 3: Strategic Thinking

What does the idea in this book look like? Why do you think the illustrator made the idea look this way? Is that what all ideas look like?
Think about a good idea you have had. Tell a partner about this idea.
What can you do if someone else does not like your idea?

Level 4: Extended Thinking

How do you know if an idea is good?
How can ideas change the world?
What if you don't like someone else's idea?

X: Lesson Plans: Foundational Learning Experiences

Please note the PKFCC standards and assessment items listed in each lesson plan. Keep in mind that you may be addressing additional assessment items and standards.

Lesson Title: The Little Tree by Loren Long

Lesson Type: Foundational Text Read Aloud

Unit of Study: Transformation	**Unit Focus Question:** What changes around me?
Objective: Children will consider some of the emotional aspects of change.	
PKFCC Focus Standard: *PK.SED.1 Recognizes himself/herself as a unique individual having his/her own abilities, characteristics, feelings and interests.* **Additional PKFCC Standards:** *PK.CKW.5 Observes and describes characteristics of living things.*	**Link to Authentic Assessment Systems** WSS: I.D.4 Identifies some feelings and responds to those of others TSG: 31 Explores changes related to familiar people or places COR: D Emotions
Materials: • Little Tree by Loren Long	**Connected Academic Vocabulary:** appearance, change , feelings, seasons, size, transform
Procedure: **Hook:** Show children the cover of the book. **Beginning:** Share the title of the book. Share the author's name as well as the illustrator's name. Ask the children what they think this book is about. **Middle:** Read the book to the children. Pause throughout the book to ask the questions suggested in Section IX and to answer questions children may have about the book. **End:** Have children briefly summarize the story. Ask any additional questions from Section IX as applicable.	
Assessment: What does the child understand about how change can impact emotions?	
Differentiation: Consider multiple entry points for all children to be successful. How do I/we plan to meet individual student needs? For example, repeat directions, extend time, adapt materials, preview questions, and provide 1:1 support.	

For children who need additional support: Consider inviting these children to sit next to a teacher or have an active task in the reading such as turning the pages as you read. *For children who are ready for a challenge*: Invite these children to read the book independently or read aloud to a friend.
Children with IEPs: How will I incorporate IEP goals into this lesson? What specific accommodations or modifications will I make? How will I collaborate with SEIT and/or related service providers?
Children whose home language is a language other than English: What language is needed to understand the lesson and activity instructions and to participate in the activity and discussion? Preview new vocabulary words with pictures. Use both English and children's home language(s) if possible. Point to the pictures as you read this book with the children and allow the children to repeat vocabulary words after you.
Teacher Tip: • Have this book available in the classroom library for children to revisit on their own.
Teacher Reflection: What went well? Why? What will I do differently, given what I have learned from observing children during this activity? Which children needed differentiation during this activity and how will I meet their needs moving forward?

Foundational Learning Experience Assessment Opportunity

Read Aloud Experience: The Little Tree by Loren Long

PKFCC Focus Standard: *PK.SED.1 Recognizes himself/herself as a unique individual having his/her own abilities, characteristics, feelings and interests.*

Authentic Assessment Alignment:

WSS: I.D.4 Identifies some feelings and responds to those of others
TSG: 31 Explores changes related to familiar people or places
COR: D Emotions

Child's name	What does the child say or do to demonstrate his/her understand about how change can impact emotions?	Notes

Lesson Title: Paper Making
Lesson Type: Learning Centers

Unit of Study: Transformation	**Unit Focus Question:** How can objects change?
Objective: Children will understand that materials can be recycled and used to make new materials.	
PKFCC Focus Standard: *PK.CKW.4 (Science): Observes and describes characteristics of earth and space.* **Additional PKFCC Standards:** *PK.ATL.1 Actively and confidently engages in play as a means of exploration and learning.*	**Link to Authentic Assessment Systems** WSS: IV.B.1 Explores the properties of objects and materials, and how they change. TSG: 26 Demonstrates knowledge of the physical properties of objects and materials COR: DD Natural and physical world
Materials: • Recycle: A Handbook for Kids by Gail Gibbons or another book about recycling • Shredded or ripped paper scraps • Blender (if available) • Sensory table or bin • Water • Various materials for scooping, pouring mixing and mashing (e.g. cups, sieves, potato mashers, etc.) • Screen with frame • White felt or cloth	**Connected Academic Vocabulary:** after, combine, continue, evaporate, liquid, newer, older, purpose, recycle, repurpose, reuse, solid

Procedure:
Hook: Share the book Recycle: A Handbook for Kids by Gail Gibbons or another book about recycling.
Beginning:
Invite children to share some of their thoughts or ideas about recycling and why recycling is important.
Share that the class is going to do a recycling project together. You are going to use old pieces of paper to make new paper.
Middle:
Fill the sensory table with ripped or shredded paper. Most of the paper should be previously ripped or shredded but children can continue to rip the paper in the sensory table.
Add water to the paper in the sensory table and invite children to continue to rip the paper and to scoop, mix, pour and mash until a mush, or pulp, is formed.
If available, use a blender to create a finer pulp.

Cover a mesh screen with pulp and allow the water to drain from the pulp through the screen.
Use a sponge to press out additional water.
Place a piece of white felt or cloth on top of the pulp to press out any remaining water.
Leave the felt on the pulp then turn the screen over and place on a flat surface.
The wet paper should fall off the screen and onto the felt.
Place the wet paper in sunny place (if possible) to dry. It will take about 24 hours for the paper to dry.

End:

After the paper is dry talk with the children about the new piece of paper. What do they notice? How has the old paper changed? How does recycling, or changing old materials into something new, help to take care of the world? How do the children cause the change in this activity?

Assessment:

What does the child say or do to demonstrate understanding that materials can be recycled?

Differentiation: Consider multiple entry points for all children to be successful. How do I/we plan to meet individual student needs? For example, repeat directions, extend time, adapt materials, preview questions, and provide 1:1 support.

For children who need additional support: Provide pictures or drawings of each step of the paper making process. Point or provide other visual cues to show children each step as they are working through the process.

For children who are ready for a challenge: Ask these children if they think this is how all recycled paper is made. Encourage additional research in books or on a computer about large-scale recycling.

Children with IEPs: How will I incorporate IEP goals into this lesson? What specific accommodations or modifications will I make? How will I collaborate with SEIT and/or related service providers?

Children whose home language is a language other than English: What language is needed to understand the lesson and activity instructions, and to participate in the activity and discussion?

Preview the paper making process with pictures. Highlight action words such as *rip* and *mash* as you and the children do these actions.

Teacher Tip:

- Consider asking families to collect and send old newspapers and pieces of paper to school for this activity.
- Using finer pulp will create paper that is sturdier than paper created from coarse pulp.
- Use words such as *purpose, repurpose* and *recycle* frequently throughout the activity.

Teacher Reflection:

What went well? Why? What will I do differently, given what I have learned from observing children during this activity? Which children needed differentiation during this activity and how will I meet their needs moving forward?

Foundational Learning Experience Assessment Opportunity

Learning Centers Experience: Paper Making

PKFCC Focus Standard: *PK.CKW.4 (Science): Observes and describes characteristics of earth and space.*
Authentic Assessment Alignment:
WSS: IV.B.1 Explores the properties of objects and materials, and how they change.
TSG: 26 Demonstrates knowledge of the physical properties of objects and materials
COR: DD Natural and physical world

Child's name	What does the child say or do to demonstrate understanding that materials can be recycled?	Notes

Lesson Title: Metamorphosis Dance
Lesson Type: Whole Group

Unit of Study: Transformation	**Unit Focus Question:** What kinds of change happen in nature?
Objective: Children will demonstrate their knowledge of metamorphosis through creative movement.	
PKFCC Focus Standard: *PK.CKW.7 (The Arts): Expresses what s/he knows, thinks, feels and believes through dance and creative movement.* **Additional PKFCC Standards:** *PK.CKW. 6 (The Arts): Responds and reacts to theater and drama presentations.*	**Link to Authentic Assessment Systems** WSS: VI.A.2 Participates in creative movement, dance and drama TSG: 35 Explores dance and movement concepts COR: Z Movement
Materials: • Book about metamorphosis • Chart paper • Writing utensil	**Connected Academic Vocabulary:** birth, butterfly, caterpillar, chrysalis, cocoon, cycle, egg, larva, life cycle metamorphosis, pupa

Procedure:
Hook: Read a book about metamorphosis (ex. The Very Hungry Caterpillar by Eric Carle) to the class.
Beginning:
Invite children to create a list of words that describe each of the four phases of metamorphosis: Egg, caterpillar, pupa, adult. Record the lists on chart paper under those four headings.
Share with the children that you would like to select one word from each list. Invite them to share their suggestions or pick words for them. You should end up with four words (ex. hatch, feast, nap, beautiful).
Middle:
Invite children to use their bodies to represent these words. Share that you would like them to create a movement for each word.
Allow children to decide if they would like to be performers and participate in a dance or be members of the audience. Share that you can repeat the activity until everyone has a turn to be a performer and an audience member if they would like.
After children have decided on a role, play music and invite the performers to share their first movement. Children can repeat the movement several times until you signal they should change to the next movement.
Repeat until children have demonstrated each word.
End:
Switch roles (performer and audience) if the children desire.
Recap some of the movements children demonstrated.

Assessment: What movements does the child use to demonstrate various phases of metamorphosis? How are his/her movements related to the vocabulary generated during the activity?
Differentiation: Consider multiple entry points for all children to be successful. How do I/we plan to meet individual student needs? For example, repeat directions, extend time, adapt materials, preview questions, and provide 1:1 support. *For children who need additional support:* Some children may feel uncomfortable being performers. Allow these children to participate in the activity as audience members. *For children who are ready for a challenge*: Encourage children to represent the four stages of metamorphosis through another art form such as music or painting.
Children with IEPs: How will I incorporate IEP goals into this lesson? What specific accommodations or modifications will I make? How will I collaborate with SEIT and/or related service providers?
Children whose home language is a language other than English: What language is needed to understand the lesson and activity instructions, and to participate in the activity and discussion? Provide a picture to represent each phase of metamorphosis and post with the heading on each word list. Draw pictures to illustrate the words children suggest when creating word lists for each stage of metamorphosis.
Teacher Tip: • Some children may be more comfortable doing this activity in a small group while others may prefer participating in a whole group format. This activity could be implemented as a whole group or a small group experience. • This activity could lead to many other experiences: Theater, musical composition, painting, etc.
Teacher Reflection: What went well? Why? What will I do differently, given what I have learned from observing children during this activity? Which children needed differentiation during this activity and how will I meet their needs moving forward?

Foundational Learning Experience Assessment Opportunity

Whole Group Experience: Metamorphosis Dance

PKFCC Focus Standard: *PK.CKW.7 (The Arts): Expresses what s/he knows, thinks, feels and believes through dance and creative movement.*

Authentic Assessment Alignment:
WSS: VI.A.2 Participates in creative movement, dance and drama
TSG: 35 Explores dance and movement concepts
COR: Z Movement

Child's name	What movements does the child use to demonstrate various phases of metamorphosis?	How are the child's movements related to the vocabulary generated during the activity?	Notes

Lesson Title: Now and Later
Lesson Type: Small Group

Unit of Study: Transformation	**Unit Focus Question:** How will I continue to change and grow?
Objective: Children will consider how people change over time.	
PKFCC Focus Standard: PK.CKW.4 (Social Studies): Develops an understanding of how people and things change over time and how to relate past events to their present and future activities. **Additional PKFCC Standards:** PK.SED.1 Recognizes himself/herself as a unique individual having his/her own abilities, characteristics, feelings and interests.	**Link to Authentic Assessment Systems** WSS: N/A TSG: 3.1 Explores change related to familiar people or places. COR: HH History
Materials: • Paper • Writing utensils • Children's "Now and Then" charts from Unit 9: Babies	**Connected Academic Vocabulary:** experience, independent, learn, responsible
Procedure: **Hook:** Reflect with children on the Now and Then activity from Unit 9: Babies. Share some of the things children did when they were babies and do differently now. **Beginning:** If possible, return to the "Then and Now" papers from Unit 9: Babies and add a third section, "Later." If it is not possible to return to the other activity, fold a piece of paper in half, title one side "Now" and the other "Later." **Middle:** Talk with children about the things they can do now and the things they would like to do when they are older. Prompt children to express their ideas with sentence starters: Now I_____, but when I'm older I will _____. Model with an example: "Now I ride the train with my family, but when I'm older I will be able to ride by myself."	

Write children's responses on the paper or invite them to do their own writing and/or drawing; help them pay special attention to the sounds they hear in the words. **End:** Summarize the children's responses; celebrate how they have grown and changed and how they will continue to change as they grow older.
Assessment: Was the child able to describe how s/he will continue to grow by explaining what s/he will be able to do in the future? What did s/he describe?
Differentiation: Consider multiple entry points for all children to be successful. How do I/we plan to meet individual student needs? For example, repeat directions, extend time, adapt materials, preview questions, and provide 1:1 support. *For children who need additional support:* Provide multiple entry points to the activity through supports such as playing a video of a child riding a tricycle or sharing a picture of a child holding an adult's hand when crossing the street. *For children who are ready for a challenge*: Invite these children to add illustrations to their "Now and Later" charts.
Children with IEPs: How will I incorporate IEP goals into this lesson? What specific accommodations or modifications will I make? How will I collaborate with SEIT and/or related service providers?
Children whose home language is a language other than English: What language is needed to understand the lesson and activity instructions and to participate in the activity and discussion? Act out the actions that children suggest and/or use pictures to support their ideas about what they can do now and what they will be able to do when they are older.
Teacher Tip: • Help children consider how they will grow and develop and what ways they will change as they grow. Avoid asking children what they want to be when they grow up. • Extend this activity in the small group, or at different time by asking children what about them stays the same and will not change. • Keep in mind that some children may describe ideas that are informed by their imagination, such as "I want to fly like Superman." Accept all ideas that children generate.
Teacher Reflection: What went well? Why? What will I do differently, given what I have learned from observing children during this activity? Which children needed differentiation during this activity and how will I meet their needs moving forward?

Foundational Learning Experience Assessment Opportunity

Small Group Experience: Now and Later

PKFCC Focus Standard: PK.CKW.4 (Social Studies): Develops an understanding of how people and things change over time and how to relate past events to their present and future activities.
Authentic Assessment Alignment:
WSS: N/A
TSG: 3.1 Explores change related to familiar people or places.
COR: HH History

Child's name	Was the child able to describe how s/he will continue to grow by explaining what s/he will be able to do in the future?	What did s/he describe?	Notes

XI. Appendices

Appendix A: Homemade Ice Cream

Ingredients:

2 tablespoons sugar
1 cup half and half or light cream (dairy-free options such as soy milk and almond milk also work, but will yield a softer ice cream)
½ tsp vanilla extract
½ cup salt
Ice
Gallon-sized zipper bag
Pint-sized zipper bag

Directions:

1. Mix sugar, half and half and vanilla extract together in a bowl.
2. Pour mixture into a pint-sized zipper bag and seal tightly.
3. Fill the gallon-sized zipper bag half full with ice.
4. Pour the salt over the ice.
5. Place the pint-sized bag inside the gallon-sized bag and seal tightly.
6. Shake the gallon-sized bag for approximately five minutes or until the ice cream is formed (play music while you do this!).
7. Remove the pint-sized bag from the gallon-sized bag. Rinse the salt from the small bag.
8. Grab a spoon, open pint-sized bag and enjoy right from the bag!

Note, this recipe produces one pint-sized bag of ice cream.

Appendix B: Sample Goodbye Book

Luz's Goodbye Book

(picture of child)

Page 1: Dear Luz,
You had a great year in pre-K!
(work sample)

Page 2: You had so much fun this year and learned a lot!
You did experiments with snow, rocks and sticks.
(photo of experiment)

Page 3: You got better at talking to your friends and solving problems. Now you take deep breaths and use your words when you are upset.
(work sample)

Page 4: You are older now and it is time to say goodbye to pre-K. You might miss your classroom, friends and teachers. You might feel a little bit excited and a little bit sad.
(photo of sad and happy face)

Page 5: This summer you will have lots of fun!
You will play outside and spend time with your family and friends.
(photo of nearby park)

Page 6: In September, you will start Kindergarten and meet new friends. You might feel nervous at first, like you did when you started pre-K, but you are ready to learn and play in a new classroom.
(drawing or photo of child with friends)

Page 7: This is a picture of your new school. They have blocks, drawing, books and science just like pre-K.
(photo of new school)

Page 8: Your family will take care of you and help you as you leave pre-K and start Kindergarten.
You can remember pre-K when you look at this book. We will miss you!
Love, Ms. Carla and Mr. Eric
(drawing or picture of family)