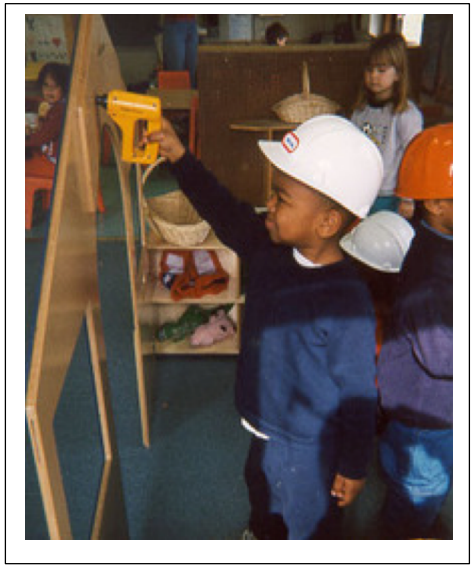

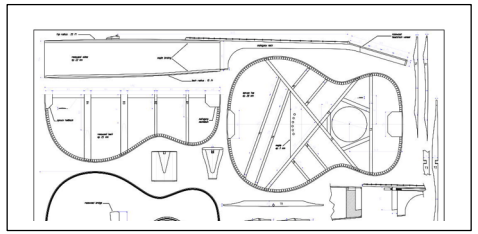

Module 4: We All Have Ideas

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INTRODUCTION

The Preschool Curriculum Modules for Lowell Public Schools were developed through funding from the Board of Higher Education, Title II, in collaboration with the University of Massachusetts Boston. Funding was provided for a group of early educators including Lowell Public Schools, Community Team Work Inc. and Little Sprouts to meet on a regular basis for over two years to develop units of study relevant to the students of Lowell.

Evidence-based practices such as Dialogic Reading, explicit and embedded instruction in phonemic awareness, concepts of print, and mathematics were embedded in units of study. Topics in science & technology, social & emotional learning, history & social sciences are also central to each curriculum unit, covering the scope of standards in the *Massachusetts Curriculum Frameworks*. Through these units of study, as children explore rich content over a prolonged period of time, they build on their background knowledge and develop new vocabulary and academic language as they construct new understandings of the world around them.

Guiding Principles

The following guiding principles were established to guide educators work as they developed these units.

1. *Differentiated Instruction:* ALL children are capable of learning and must have access to a high quality, rigorous curriculum to foster learning.
2. *Intentional Teaching:* Preschool teachers provide intentional instruction, through carefully sequenced lessons that expose children to new learning, facilitate exploration, and assist children in mastering new skills and knowledge.
3. *Resources:* Educators model academic concepts and social-emotional skills by deliberately choosing and presenting resources to support children's learning in the classroom across a variety of settings - whole group, small group, and center time.
4. *Equity for All:* Preschool teachers recognize, celebrate, and build upon differences among students, drawing upon each individual's culture, background knowledge, and language, to intentionally plan instruction to support all students in developing new skills and knowledge.
5. *Progress Monitoring & Assessment; Curriculum Planning and Program Evaluation:* Preschool teachers use formative and summative data to reflect on children's progress in academic and social-emotional skills and to reflect on their own teaching practices that impact outcomes for all learners.
6. *Promoting Positive Classroom Environments*: Educators establish an enthusiastic learning environment that stimulates connections between and among children and adults while cultivating students' approaches to learning, social-emotional well-being, and academic success.
7. *Family and Community Engagement:* Families, the community, and schools are partners in collaboratively fostering all students' growth.

Curriculum Map

The process of designing the curriculum modules included development of a grade level map in which the *Massachusetts' Curriculum Frameworks* in English Language Arts, History & Social Sciences, Science, Comprehensive Health, and the Arts are used to guide student learning. Within each module, these standards are shown in bold italics.

The scope and sequence of *Building Blocks*®, and Handwriting without Tears® were integrated to provide instruction in mathematics, fine motor development, and handwriting.

In Module 0 there is a strong focus on the Massachusetts *Standards for Preschool and Kindergarten Social and Emotional Learning and Approaches to Play and Learning* [see: http://www.doe.mass.edu/kindergarten/SEL-APL-Standards.pdf] as well as guidance from the Center for Social Emotional Foundations for Early Learning (CSEFEL) [see: http://csefel.vanderbilt.edu/resources/training_preschool.html]. This guidance sets the stage for creating supportive classroom environments that promote and build relationships in the classroom. Subsequent modules provide opportunities for children to develop executive functioning skills and social-emotional skills such as self-regulation, focusing attention, and persistence, while establishing friendships and learning how to be a member of a group. Teachers are encouraged to revisit Module 0 and the resources for social and emotional learning throughout the year,

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Daily Schedule

The following components are expected to be part of the daily schedule. The following recommendations are for implementation in a **half-day program** (two and half to three-hours).

- First Circle/Dialogic reading: 20-30 minutes
- Introduction to Centers: 10-15 minutes
- Centers: 60 minutes
- Small Groups: 15 minutes in Fall; 20 minutes in Spring (held during center time twice a week for English Language Arts and Mathematics)
- Outdoor Play or Gross Motor and Movement: 30 minutes
- Routines (including breakfast, snack, lunch and transitions): 30 minutes
- Second Circle - science, phonemic awareness, concept of print, social emotional learning, and community building: 30 minutes

The following recommendations are for implementation in a **full day program** (six hours or longer).

- First Circle/Dialogic Reading: 20-30 minutes
- Introduction to Centers: 10-15 minutes
- Centers: 60 minutes
- Small Groups Mathematics: 15 minutes in Fall/20 minutes in Spring [four times a week - two groups with adult support and one group engaged in independent, low support activity]
- Small Groups English Language Arts: 15 minutes in Fall/20 minutes in Spring [four times a week; two groups with adult support and one group engaged in independent, low support activity]
- Outdoor play or Gross Motor & Movement: 30 minutes
- Routines including breakfast, snack, lunch, transitions, and rest time: 3 hours
- Second Circle: Science, phonemic awareness, concept of print, social emotional learning, and community building: 30 minutes

Learning Centers

Child choice and accessible material that promote learning must be made available for a minimum of 30 minutes per day for half day and 60 to 90 minutes for full-day programs. Intentionally planned and implemented learning centers/opportunities must be provided daily, including:

- Art Studio
- Easel
- Writing
- Manipulatives
- Blocks
- Math
- STEM (Science)
- Discovery (Sensory)
- Library
- Drama (Dramatic Play)
- Music/Movement
- Outdoor or active gross motor play
- Computer or listening center

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Supporting Early Language and Literacy

Each of the modules includes resources for teachers for supporting early language and literacy:

- **Book Sheets:** Each module includes book sheets that provide suggestions for prompts and vocabulary development that adults can use with the various books highlighted in the module.
- **Tiered Vocabulary Lists**: Each module includes an extensive list of vocabulary words, categorized as "tier 1, 2, or 3" that have been drawn from the books used in the module. Key words can be defined before and during reading. It may also be useful to insert synonyms to extend thinking and learning (e.g., to extend the word problem, you might add words such as mistake, disaster, catastrophe, emergency, etc.). The meaning of words can also be highlighted using gestures or by varying the tone of voice or pacing of reading.

Dialogic Reading

Dialogic reading is a research-based strategy that has been proven effective. It expands interaction between the adult and child. It can be done by teachers or parents, and is simply about children and adults having a conversation about a book.

Typically, when adults share a book with children, the adult reads and the child listens. In dialogic reading, the adult helps the child become the storyteller. The child takes an active role while the adult listens and asks meaningful questions, and scaffolds the child's processing of the story. The key to an effective and productive read-aloud is stimulating the child's active engagement and making it fun.

This engagement involves interaction between the adult and the child, using various prompts. There are two sequences of prompts that the adult uses in dialogic reading, described by the acronyms PEER and CROWD. These sequences were developed by Grover J. (Russ) Whitehurst. A detailed explanation of these acronyms may be found in "Dialogic Reading: An Effective Way to Read to Preschoolers" which may be accessed at: http://www.readingrockets.org/article/dialogic-reading-effective-way-read-preschoolers.

The PEER sequence is a short interaction when the adult:

- **P**rompts the child to say something about the book,
- **E**valuates the child's response,
- **E**xpands the child's response by rephrasing and adding information to it, and
- **R**epeats the prompt to make sure the child has learned from the expansion.

The CROWD sequence describes five types of prompts used by the teacher:

- Completion prompts: Leave a blank at the end of a sentence and get the child to fill it in. These are easy to use in books with rhyme or repetitive phrases (e.g., "Jack and Jill went up the ____").
- Recall prompts: These are questions about what happened in a book a child has read or listened to (e.g., "Can you tell me what happened to ___ in this story?"). These help children in understanding plot and describing sequences of events. They can be used at the end of a book, or at the beginning of a book a child has heard before.
- Open-ended prompts: These prompts focus on illustrations in books (e.g., "Tell me what's happening in this picture."). They help children increase their expressive fluency and attend to detail.
- Wh- prompts: These prompts usually begin with "what, where, when, why, and how" questions, and usually focus on the pictures in books (e.g., "What's the name of this?"). These prompts teach children new vocabulary.
- Distancing prompts: These prompts ask children to relate the pictures or words in the book to experiences outside the book (e.g., " Remember when we went to the farm? Which of these animals did you see there?"). Such prompts help children connect books to the real world and also help with verbal fluency, conversational abilities, and narrative skills.

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Repeated Interactive Read-Alouds

The most effective use of children's literature relies on intentional planning and follow-up, including introducing and defining new vocabulary before and during reading, and reinforcing and extending it after a read-aloud. Book reading is most effective when it is not limited to a single reading.

Repeated interactive read-alouds allow teachers to scaffold children's understanding of the book. They model strategies for making inferences, describing things and events, explaining reasons for their thinking. They also teach new vocabulary and concepts. These techniques have shown to be effective in increasing children's engagement, understanding, and appreciation of literature in preschool and kindergarten settings. There are three levels of interactive read-alouds:

1. *First reading:* The main goal of a the first read-aloud is to enjoy a story by focusing on its meaning. The teacher introduces the plot with a sentence or phrase (e.g., "This story is about…"). The teacher reads the story using vocal and facial expression, gestures and dramatic pauses, variations in the pace of reading, and eye contact to capture and maintain children's interest and enjoyment,
2. *Second reading:* Second readings occur a day or two after first reads. The purpose is to enrich children's comprehension of the story. The teacher encourages children to remember things from the book, provides vocabulary explanations, and asks inference and explanation questions. the second read might focus on the other characters' motivations or thoughts.
3. *Third reading*: children are guided in retelling the story as the teacher reads some of the text. Teacher comments and questions are intended to generate children's explanations about the causes of events and what characters are thinking or feeling (e.g., "What does he think?" "How do you think she's feeling?"). These questions allow children to use analytic thinking to explain why events occurred.

   After-reading Discussions

   Each reading is followed by a "why" question that requires children to make inferences about and explain several story events. Then we use follow-up probing questions to support children's ability to answer broader explanation questions.

This process is explained in detail in an article "Repeated Interactive Read-Alouds in Preschool and Kindergarten" by Lea M. McGee and Judith Schickedanz found at: http://www.readingrockets.org/article/repeated-interactive-read-alouds-preschool-and-kindergarten

Motor and Neurosensory Development

One area of development that is often overlooked or not directly planned for in early childhood programming is motor and neurosensory development, yet it is critically linked to learning, especially reading and writing.

Scientific research has shown a strong connection between physical activity/movement and brain circuitry. The early years, from birth to age five, are a critical period for both brain and body development. Sensory-motor activities can be embedded throughout the child's daily experiences. These include large motor activities that build strength, control, and coordination, as well as experiences that support smaller muscles in the hands and fingers.

While these kinds of activities are referenced throughout the curriculum modules, they can be further supported on an ongoing basis within the classroom, as well as through planned and facilitated outdoor play.

The Appendix for each module includes a section entitled "Supporting Motor and Neurosensory Development," which includes suggestions for activities, and teachers are encouraged to share this information with families.

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Lowell Public Schools in Partnership with University of Massachusetts - Boston	**Timeline: Weeks 21-26**
Module 4 Theme: We All Have Ideas	
Module Overview: This module will emphasize using communication and collaboration to develop and express one's own ideas. The processes of planning, design, and construction will be stressed as children bring their ideas to life through representation in pictures, print, and oral language. English language arts and early literacy skills will be highlighted, such as formulating and expressing ideas, using one's imagination, selecting materials, making predictions, comparing and contrasting texts, and creating new endings to stories. Children will also explore and express STEM concepts related to science, technology and engineering, and mathematics, such as understanding and constructing simple machines, and concepts in geometry and measurement.	
Essential Questions: 1. What process is used to construct items used in daily life? 2. How and why do people select various materials for building and construction? 3. How do people communicate their ideas to others? 4. Why can collaboration aid us in solving problems? 5. How does planning inform design? 6. What are the benefits of developing a prototype? 7. How is a house built? What are the steps? Who is involved? What do they do? How do they work together? 8. How is technology used to support and inform design? 9. How are tools selected and used safely? How are simple machines used in our daily life? What tools and machines can help us move objects? 10. How did people build a long time ago? What is the same or different about how people build homes today? Do people build homes the same way or differently around the world? 11. How does force help us move things? Push and pull. 12. What is the difference between tools and machines? 13. What are some famous buildings and monuments built in our local community, state, and country? 14. What holidays celebrate the work of individual responsible for building our country? Labor Day and Veterans Day. 15. What are some things constructed that improve our daily life? (sidewalks, bridges, canals, sewer, telephone, cell towers, satellite, parks, playground)	**Key Understandings:** 1. Man-made and natural resources are used in building. 2. Planning helps people organize ideas for completing each step in the process. 3. People develop plans to bring ideas to life. 4. A design is way to represent your ideas. 5. Letters are put together to form words. 6. Words used in stories represent ideas. 7. Designs inform how an item is constructed and what materials are used. 8. Solving problems is the jobs of engineers. 9. Innovations and ideas require an idea, plan, design, material selection, prototype, redesign, and execution. 10. Materials are selected to support the use and design of products as they are constructed. 11. Tools and machines make the work of people easier as they construct. Simple machines such as lever, pulley, wheel, ramp, and gears are use in daily living. 12. Communication and collaboration are key to construction. 13. All objects are moved by force. (push or pull) 14. Many people work in the construction profession. 15. Design and materials selection impact stability and durability.

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Module 4 Objectives:

1. Discriminate letters and words.
2. Recognize some upper-case letters.
3. Recognize lower case letters in own name.
4. Represent ideas in drawing or print.
5. Begin adding details to drawings.
6. Label pictures using print.
7. Ask or answer questions about stories read aloud.
8. Generate a list of words with similar meanings with support.
9. Use words and phrases heard in books read aloud, in play.
10. Orally retell a story in sequence.
11. Explore and describe spatial relationships.
12. Recognize the attributes of length, area, and weight and use appropriate vocabulary.
13. Create and represent targeted two or three-dimensional shapes by combining other shapes.
14. Choose words to describe position.
15. Choose words to describe ideas in detail.
16. Talk with peers about ways to solve or prevent problems.
17. Revise designs, drawings, text and plans to achieve goal.
18. Persevere and attend to task.
19. Articulate how and why various materials are used in construction to stabilize or achieve durability.
20. Identify, describe, sort, compare, and create two-dimensional and three-dimensional shapes and objects.
21. Understand and use relative positional language to describe the position of objects (*up, down, beside, inside, next to, close to, above, below, in front of, behind, under, over, top, bottom)*.
22. Become aware of national monuments and local bridges, and holidays that celebrate the men and women who helped build this country.
23. Count to 10.
24. Produce a certain number of objects up to 10 keeping track of which objects have been counted, even in unstructured arrangements.
25. Compare by counting.
26. Order numbers.
27. Directly compare amounts using words like bigger and longer.
28. Order numbers in lengths.
29. Count to 10 and beyond, focusing on identifying numbers just before and after a given number.
30. Measure by placing units of length end to end.
31. Identify and match shapes, including finding and describing objects and shapes in the environment.
32. Compose shapes to make pictures or designs.
33. Count to 10 and back to 0.
34. Add and subtract small numbers.

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Differentiation, Modification/Accommodations, Sheltered Instruction for All

Strategies designed to support children with disabilities or exceptional learning needs are likely to benefit all children with a range of abilities or background experiences. Some children may have Individual Education Plans (IEPs), but for many children, especially those who have not previously have been in group settings with peers, their developmental or learning needs may not yet have been diagnosed. It is therefore critical that teachers and caregivers observe children carefully and plan experiences with a broad perspective.

What could you do to support dual language learners and children with disabilities or exceptional learning needs in accessing the curriculum?

- Model tiered vocabulary using visual and physical cues, picture word charts; extend processing time/wait time.
  - Talk and move: Repeat and restate in own words using single words, phrases or complete sentences; use movement to illustrate definition of words.
  - Highlight key vocabulary for DLLs throughout the day.
  - Provide students with structures to use new vocabulary (e.g., use sentence frames and sentence stems, etc. to facilitate children's use of oral language). This should be done in the context of conversations and authentic activities in which children are actively engaged.
  - Engage children in conversations during routines and meals to reinforce new vocabulary.
  - Use engaging informational texts as a platform for intensive vocabulary instruction, limit to a few academic terms for intensive vocabulary instruction.

Resources: Each module's Appendix will include information about WIDA Standards.

- WIDA Standards: The *Early English Language (E-ELD) and Early Spanish Language (E-SLD) Development Standards* (2014) are designed for use by early childhood practitioners, including child care, Head Start, preschool/prekindergarten educators, and caregivers. These can be accessed at https://www.wida.us/standards/EarlyYears.aspx. The purpose of these E-ELD standards is to provide a developmentally sound framework for supporting, instructing, and assessing dual language learners (DLLs), ages 2.5-5.5 years.
- WIDA "CAN DO" descriptors: These descriptors highlight what language learners ***can do*** at various stages of language development as they engage in teaching and learning in academic contexts. These can be accessed at https://www.wida.us/standards/CAN_DOs
- The website for the Center on the Social and Emotional Foundations for Early Learning (CSEFEL) provides resources on supporting children with challenging behaviors. See: http://csefel.vanderbilt.edu/resources/training_preschool.html.

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What adaptations and modifications must be made to support children in your class?

- Ensure that the environment supports inclusion of children with diverse learning needs. See "Building Supportive Environments: Companion Document to the Massachusetts Standards for Preschool and Kindergarten for Social and Emotional Learning and Approaches to Play and Learning" at http://www.doe.mass.edu/kindergarten/SEL-APL-Env.pdf
- Adapt the physical or social/emotional environment to match the learners in your class. For students with vision or hearing impairments, students with physical disabilities, and/or cognitive/language delays, such as:
  - providing preferred seating
  - scaffolding directions/activities
  - providing visual supports for communication (using illustrations to communicate needs and ideas)
  - providing visual supports for multiple steps
  - modeling by peers/adults
  - providing resources/manipulatives accessible to learners
  - using frequent check-ins for understanding
  - using practice/repetition; connecting new learning to prior knowledge/experience
  - promoting peer tutoring
  - simplifying choice boards
  - providing activities that build and support all children's motor and neurosensory development, including gross and fine motor skills (e.g., strength, balance, agility, position in space, visual perception, visual discrimination, hand strength and coordination, finger dexterity, scissor skills). Also see Appendix section on Supporting Motor and Neurosensory Development.

How will you use observation and assessment to inform instruction to promote each child's development of social skills and relationships, communication, and concepts & skills?

- Plan to observe and document specific learning skills each week.
- Develop systems to ensure that data is collected on all children.
- Use data to inform small groups and establish timelines for regrouping based on data.
- Provide "Response to Intervention" groups at least weekly for children needing additional support in language/literacy and/or mathematics.

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How can you make the curriculum accessible to ALL children?

- Apply the seven principals of Universal Design for Learning (UDL).
  - Incorporate multiple engagement opportunities for children to engage in whole and small group activities and to practice them in centers.
  - Provide multiple means for children to communicate their ideas through gestures, pictures, words, and print.
  - Pair students with peers with similar abilities in small group activities; pair students with stronger skills with children that need more assistance during centers.
  - Consider a variety of ways for students to interact with content presented in various instructional learning formats.
  - Use photographs or video to provide background knowledge in advance of the lesson.
  - If available, use an interactive white boards or other technology to generate students' excitement.
  - Use hands-on, active engagement strategies to support learners (e.g., while describing characteristics of a triangle, point to sides and corners and allow students to touch and count the sides the corners; when using positional words, support learners by using a template that models the correct position; use physical demonstration to define and illustrate action words).

  Other suggestions:
  - Equitable use: Enable all users equal access to avoid segregation. Consider flexibility in use to accommodate a wide range of individual preferences and abilities.
  - Ensure that curriculum is easily understood by all language levels.
  - Adjust the complexity of presentation based on progress monitoring.
  - Use multiple means of presentation to engage children (pictures, verbal, tactile, movement).
  - Focus on success and engagement; eliminate barriers; provide a supportive environment that provides ongoing assistance, builds on background knowledge, and scaffolds instruction to teach "Big Ideas" through tolerating errors.
  - Accommodate student perspective, comfort, motivation, and engagement based on children's responses and progress monitoring data.
  - Ensure that the environment is appropriate and organized to allow physical and cognitive access to instruction, environment, and grouping.
  - Incorporate student interests into centers and activities.
  - Promote the processes of exploration, investigation, and discovery.
  - Provide students with choices for engaging with the curriculum by offering multiple activities that incorporate the same objective.
  - Provide adjustable levels of challenge.
  - Allow sufficient time for children to fully explore and practice.
  - Choose books, materials and activities that are sensitive and responsive to diversity.

Center Connections:

- Library Center: Include books that reinforce and extend concepts presented in each module (e.g., have students search for triangles and non-triangles using obvious and not so obvious shape books).
- Create a center/space where children can practice skills and concepts highlighted in the module.
- Provide extensions or challenges for students who are working above grade level, such as encouraging them to trace objects.
- Create opportunities for children to use key vocabulary words in the classrooms and they are actively engaged.

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Teacher Reflection

Effective teaching means teaching intentionally, and reflecting constantly – both planning ahead and looking back. Teacher reflection impacts the next level of planning and teaching intentionally. If all the children did not have the necessary skills or knowledge for an activity, consider what could have been done differently to prepare for the activity. When an activity is over, consider the following questions:

- Did all the children have the necessary skills/knowledge for this activity?
- Were all the children engaged?
- Who was not? Why?
- What did you observe about the group? Individual children?
- What needs to happen next?
- How will we accomplish it?

See Appendix in each module for additional information on supporting Dual Language Learners/English Language Learners.

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Tiered Vocabulary for Module 4			
Tier 1	**Tier 2**		**Tier 3**
idea shapes ball square box popsicle sticks round straight square circles triangles rectangles	whooshing squelch transporting rumbling tumbling whirring bland dome form task dig **Tools**: rake, hammer, wheelbarrow, drill, saw, wrench, pencil, nail, screwdriver, level, tape measure, drill, machine, transit, bulldozer, dump truck, crane, pulley, cement mixer, shovel, broom, flashlight, excavator, fork lift, roller, paint brush, screw, scissors, electric saw, jig saw, tool box, tool belt, apron, hard hat, safety vest, eye protection/goggles, knee pads, gloves **Materials**: wood, bamboo, plastic, rock, bricks, clay, mud, straw, dung, cement, concrete, asphalt, metal-steel, iron, copper, glass, tar, ice, cloth, drywall, insolation, siding, and shingle.	machines plan erect assemble construct objects describe identify space attribute analyze compare sort face model roll slide stack apart function produce **Relative positions:** beside, inside, next to, close to, above, below	design design plans inertia meadow mason apprentice **Construction Jobs:** architect, mason, plumber, electrician, general contractor, roofer, laborer, tiler, septic system, crew, carpenter, bricklayer, painter, landscapes, foreman Plexiglass manufacture tamper tar caterpillar treads robotic spool cherry picker sphere pipe cleaners pattern blocks cube, tube/cylinder two-dimensional three-dimensional

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Week 21	Day 1	Day 2	Day 3	Day 4	Day 5
First Circle	1st Read: What Do You Do with an Idea? Kobi Yamada OR Not a Box Antoinette Portis ***Standards:*** ***PK.MA.R.4***	1st Read: Building a House Bryon Barton Count corners lesson 2 - Point out shapes in the book. Ask children to show you straight and curved lines. Identify triangles, rectangles, square in pictures. - Draw or use felt cut outs of triangles of a range of different sizes and types. Talk about a triangle always having three sides even if it has a narrow or wide side.	1st Read: If I Built a House Chris Van Dusen Sing: "This is the Way We Build a House" ***Standards:*** ***PK.MA.R.4***	Read: How a House is Built Gail Gibbon Describe how the surveyor, heavy machinery operator, carpenter crew, plumber, and other workers build a house by working together. ***Standards:*** ***SEL 7***	1st Read: Dig, Dig, Digging Margaret Mayo
Second Circle	How a House is Built Gail Gibbon Use this book to talk about the people that construct house and the material they use. Sing "This is the Way We Build a House"	Bring a toolbox with tools to circle. Talk about the name and use of each tool. Use books as resources Tool Book Gail Gibbons *(Not Purchased)* OR Old MacDonald Had a Workshop Use the book as a reference to find the name of tools or to learn more about how they are used. Talk with children about using books as a reference. Sing "Johnny Works with One Hammer"	***Building Blocks*** Vol. 2 pp. 284 Guess My Rule Then show book Change, Changes Pat Hutchins Look for triangles in the book; tell children that they can use the book in the block or book areas to tell stories to one another about shapes and building with blocks, using a wordless picture book. Encourage children to label and name shapes as they tell the story. ***Standards:*** ***PK.G.2***	Read: Cubes, Cones, Cylinders and Spheres Tana Hoban Sing "The Ants Go Marching"	***Building Blocks*** Vol. 2 pp. 286 Snap Shot and Mr. Mix Up (shapes) Sing "London Bridge is Falling Down"

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<table>
<tr><td rowspan="2">Handwriting Without Tears</td><td>Favorite Activity</td><td>I Know My Numbers 7 Booklet, 2 weeks to complete, p.197</td><td>Letter & Number Play for 7 and A</td><td>Rock, Rap, Tap & Learn CD
Diagonals</td><td>Favorite Activity</td></tr>
<tr><td>Counting & Numbers
Seven – 7, p.189</td><td>Alphabet Knowledge
Lowercase Letters on the Edge, p.56</td><td>Writing
Pre-Stroke for A, p.153</td><td>Writing
Letter A, p.153</td><td>Writing
Shape – Triangle, p.154</td></tr>
<tr><td>Introduction to Centers</td><td colspan="5">Introduce balance scale and compare three items. Discuss with children how determining which item is heavier depends on what they are comparing it to.
Before putting out nuts and bolts in manipulative center, talk to students about how screws are tiny ramps that wrap around them. Talk about how you select the size of the nut for a bolt based on the diameter or the size of the whole.</td></tr>
<tr><td>Mathematics Small Group 2 times per week</td><td colspan="2">Building Blocks
Vol. pp 296,
X-Ray Vision 1 (need appropriate counting cards 1-10).
Children who need more practice counting could also engage in Dinosaur Shop – filling orders with number cards page 297.</td><td colspan="3"></td></tr>
<tr><td>Language Literacy Small Group 2 times per week</td><td colspan="2"></td><td colspan="3">If We Built a House: Class Book Lesson Plan

Standards:
PK.W.MA.1 & 2
PK.SL.MA.4 & 5
MA.RF.3.a</td></tr>
<tr><td>Discovery</td><td colspan="5">Wet Sand – Use to make models of three-dimensional shapes. Use plastic containers such as cups or pails for cylinders, Tupperware® shapes to make rectangular prisms. Only shovels, 3D shape blocks, and containers to make 3D sand castle should be placed in table to maintain focus on observing and discussing 3D shapes. Vary amounts of water added to sand.
HOT Questions: Are you able to build a house with dry sand, why or why not? What happens to the sand when you add a little water? What difference does the amount of water added make?
 

Standards:
PK.G.MA.1& 3</td></tr>
</table>

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STEM	Display the balance scale with a variety of recyclable materials (screws, nuts, bolts, foam, tubing, and wood pieces). Encourage children to compare weight of objects. Children can chart items as heavy or light when compared to one another. Place the book How Do You Lift a Lion? by Robert Well in the areas and talk about how the balance scale is a simple machine and that it has fulcrum. ***Standards:*** ***SEL.10***		
Manipulatives	Blocks with plans to follow OR Attribute blocks and cards (with color/line, lines, and outline only).		Nuts and bolts - seriate by size (small to large nuts; short to long bolts; thick and thin diameter). ***Standards:*** ***PK.MD.MA.1, 2, 3.***
Math Center	Place Tangrams in the areas; construct pictures. http://www.makinglearningfun.com/themepages/MathTangrams.htm Practice Shape sorting and making new shapes – shape factory ***Standards:*** ***PK.MD.MA.1*** ***PK.G.MA.1.***	Place 3D shapes in the area with the book Cubes, Cones, Cylinders and Spheres Tana Hoban Geoboards and elastics to make shapes.	Unifix cubes, and two other non-standard measurement materials. Place three different stuffed animals in the areas. Ask children to measure and record each animal's lengths using non-standard measures. Later you will ask for these measurements and use them to develop a design to build a home for each animal. ***Standards:*** ***PK.MD.MA.1***
Art Studio	Place large sheet of paper across table. The group will trace 3D containers. ***Standards:*** ***PK.MA.G.2 .3***		Collage with shapes including a variety of triangle, squares, rectangles, circles and non-shapes. Children can use to construct pictures of structures. Use the word design and produce. Encourage children to think about their ideas and plan picture before they assemble it. Ask children, "How did you assemble this?" Encourage children to use peers' designs to recreate similar structures. "Do you think you can draw a picture using Alison's design?"

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Gross Motor	Small group: Gross motor. Shape hopscotch using 6 shapes taped to the floor- ask children to move to shapes.	Have children work in groups to make triangles on the floor with their bodies then ask them to form groups of 4 children and predict a shape they could make. ***Standards:*** ***PK.G.MA.2***	Shape beanbag toss. Name the shape and place on position that Simon says. ***Standards:*** ***PK.G.MA.1 & 2***	Create an obstacle course - create puddles, structures, and other obstacles for children to walk around, over, under, or stand between. OR Use pool noodles and large boxes to create a tunnel maze for children to move through.
Writing	Encourage children to draw their ideas OR Make books about how they could describe one of their own ideas. Add tracing paper, graph paper, shape tracers, protractors, rulers Picture word cards: 2D and 3D shapes in different positions Picture and word cards or rings of tools			
Book Area	Place books about tools, machines and constructions in book area. Have at least one counting book and one alphabet book out in area.			
Conversations during routines and meals	Tell me about your ideas. Do you ever dream? What do you think about creating? When you plan, what do you think about?			
Drama	Choose one of the following: The Big Dig or Construction Sites - use the activity lesson plan to guide your thinking about setting up the environment. ***Standards:*** ***SEL.7, 8 & 9***			
Blocks	Use big blocks and painter's tape to follow design to create a specific structure. OR Create a design challenge example: Can you build a bridge to help the cars get over this waterway? Use construction paper as a waterway. If you have the STEM fairy tale problem solving kit for "Three Billy Goats Gruff" place it in block area.			
Computer &/or Listening Center	My Kids.com http://www.mikids.com/Smachines.htm BINGO and WORD CARDS http://www.mes-english.com/flashcards/tools.php			
Other				

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Week 22	Day 1	Day 2	Day 3	Day 4	Day 5
First Circle	1st Read: My Dream Playground Kate M Becker Introduce design challenge lesson plan 1 ***Standards:*** ***PK.MA.R.4*** ***SEL 12***	1st Read: Old Macdonald Had a Woodshop Lisa Shulman Old MacDonald lesson: Talk about Tools - see if children can recall the name of tools brought to circle prior to reading books. Have children perform actions as you read book. Point out letters E I E I O and words in text. ***Standards:*** ***MA.RS.8.a***	***Building Blocks*** Vol. 2 pp 298. Know it Down and Mr. Mix-up (comparing) Read: Pete the Cat: Construction Destruction James Dean	1st Read: The House in the Meadow Shutta Crum *Rhyming and counting backwards* *PK. MA. RF. MA. 2 and MA. 2. a.* ***Building Blocks*** Vol. 2 pp 302. Knock it Down and Mr. Mix up Comparing ***Standards:*** ***PK.G.MA.1***	2nd Read: What Do You Do with an Idea? Kobi Yamada OR Not a Box Antoinette Portis ***Standards:*** ***PK.MA.R.4***
Second Circle	Read: Cubes, Cones, Cylinders and Spheres Tana Hoban ***Building Blocks*** Vol. 2 pp 296. Warm-up Count and Move & Mr. Mix Up Counting.	***Building Blocks*** Vol. 2 pp 300. Warm-up Count and Move Patterns and Mr. Mix-Up Counting. Play Simon Says with shapes passed out, then as group, sort them by the number of sides.	Follow up deconstruction: "Build me a House (Old House)" Talk about similarities and difference between oval and circles.	Read: Alphabet Under Construction Denise Fleming Show pictures of letters and have children make letters using wooden craft stick, string or yarn and/or pipe cleaners. Encourage children to select the material that will best assist them in constructing each letter.	Measuring Stuffed Animals See Lesson Plan

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				Have children work in teams, take turns supporting one another in making target letter. *Adaptation*: Use letter cards to place materials on, and provide a stronger visual support for individuals. ***Standards:*** ***PK.G.MA.1***	
Handwriting Without Tears	Favorite Activity	Choice Letter & Number Play	Drawing Draw with Line It Up, p.45	Choice Letter Play for M	Pre-Writing Door Tracing, p.107
	Counting & Numbers Wet-Dry-Try for 7, pp. 174-175	Alphabet Knowledge Lowercase Letters on the Edge, p.56	**Writing** Shapes – Diamond, p.155	**Writing** Pre-Stroke for M, p.156	**Writing** Letter M, P.157
Introduction to Centers	*Day 1*: Play stuffed animal (Pete the Cat) in Math center: During introduction to center, explain how to play game, taking turns being the teacher as described. Talk about how construction works - having to follow directions to get the job done. *Day 2*: Model how a foreman might use language to tell others where to put blocks using plans. Encourage children to take turns being the foreman and communicating how to place blocks to build structures. ***Standards:*** ***PK.G.MA.1***				
Mathematics Small Group 2 times per week			***Building Blocks*** Vol. 2 pp 300. Small group – X-ray vision Use a dollhouse or parking garage to move dolls or cars around objects. *Alternative:* Use placemats. Talk about the objects use positional language, asking children to move dolls or cars as stated.		

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Language Literacy Small Group 2 times per week	Name of activity: We Can Fix It: Class Book Lesson Plan ***Standards:*** ***PK.W.MA.1 & 2*** ***PK.SL.MA.4 & 5*** ***MA.RF.3.a***	
Discovery	*Wet Sand* Encourage and model positional language and precise mathematical language. 2D Recommendations: Have students stamp circles into wet sand/or clay using buttons and other round items from around the classroom. Challenge: Have a stamped image ready in the wet sand for children to examine; ask if they can predict and identify which circular object made the stamp. 3D Recommendations: Make models of three-dimensional shapes. Use plastic containers such as cups or pails for cylinders, Tupperware® shapes to make rectangular prisms. Only shovels, 3D shape blocks, and containers to make 3D sand castles should be provided in table to maintain focus on observing and discussing 3D shapes. Vary amounts of water added to sand. Questions: Are you able to build a house with dry sand? Why or why not? What happens to the sand when you add a little water? What difference does the amount of water added make? ***Standards:*** ***PK.G.MA.1*** ***PK.MA.G.2-4*** ***SEL.10***	
STEM	Balance scale with materials for weighing (consider using some of the math manipulatives students have been using during Centers). Weigh objects and sort into light/heavy using a T chart. Challenge: Provide students examples to counter the misconception that size determines weight (e.g., a smaller heavier ball compared to a larger lighter ball). ***Standards:*** ***PK.MD.MA.1 & 3*** ***PK.MD.MA.3*** ***Engineering design: 2.1***	

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Manipulatives	Play stuffed animal (Pete the Cat) in Math center – in introduction to center, explain how to play game, taking turns being the teacher and describing how to construct something.	Place Tangrams in the areas to construct pictures.	Place foam 3D shapes in the area.	Place book and materials from Alphabet Under Construction (Denise Fleming) lesson. Provide manipulative materials and wipe boards and encourage children to select letter cards and draw letters on wipe boards, or use manipulative materials such as wooden craft sticks, string or yarn, pipe cleaners to construct them. Encourage children to select the material that will best assist them in constructing each letter.
Math Center	Sort shapes into baskets by the number of sides. Include circles to force children to create a basket with zero corners. ***Standards:*** ***PK.MD.MA.3*** ***PK.MA.G.2***			
Art Studio	Print with three 3D solid objects and paint. Talk about faces, vertices, and edges. • *Face*: An individual flat surface of a solid. • *Sphere*: No flat surface • *Cube*: 6 individual flat surfaces. • *Vertex*: A corner on a 2D/shape; a 3D solid cube has 8 vertices. • *Edge*: The intersection of two faces; a cube has 12 edges. • *Vertices*: plural word for vertex. ***Standards:*** ***PK.MA.G.3***		Make 3D shapes using straws and play-dough. Alternative: Use marshmallows and plastic straws or coffee stirrers. Place 3D shapes. Discuss the face, vertex/vertices (more socially known as corners, edges). ***Standards:*** ***SEL.10*** ***PK.MA.G.3***	
Gross Motor	"Johnny Builds with one Hammer" Use whole body movements - Use head as a hammer; have children sing and move each body part in isolation.			Play Simon Says using positional language. - Hold your hand over your head. - Stand next to/beside a friend. - Wiggle your arm between your legs. - Move one step backward. - Turn so I am in front of you.

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Writing	**Design Center:** Challenge Part 1. See Lesson Plan. Turn the writing area into Design Center. Place pencils, easer, markers, crayons, ruler, stencils, and large sheet of paper in the area. Encourage children to work individually or in teams. ***Standards:*** ***SEL.10***
Book Area	Place books of famous bridges, buildings, and signs in book area. Talk to children about the name of bridges, buildings, and what the signs say. "The Golden Gate Bridge Song" – Make connection to music/dramatic play centers. Encourage children to place their own self-created books in the book areas to read to peers. Place books read aloud in book areas for children to examine. 
Conversations during routines and meals	Use positional language to talk about the location of objects or children. Can you pass me the napkins that are next to the cups? I see you are between Jack and Jill. Who are you next to?
Drama	The Big Dig or Construction Sites: Use the activity lesson plan to guide your thinking about setting up the environment. Encourage children to name tools and discuss how they will be used. Encourage children to take on various roles in including foreman, carpenter, plumber, etc. Remind them about how workers need to communicate to one another to complete the job. ***Standards:*** ***SEL.7-10***
Blocks	Place Structure Book in block area. Encourage children to build famous structures and bridges. Look at pictures of block structures and follow the design. Place books and pictures of the interesting building in the block area. Encourage children to label structures and to talk about how they would build them. Encourage and model the use of positional language, identifying and describing 2D/3D figures. At introduction to centers, model how a foreman might use language to tell others where to place blocks using plans. Encourage children to take turns being the foreman and communicating how to place blocks to build structures. Extend into Dramatic Play Area.
Computer &/or Listening Center	
Other	

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Week 23	Day 1	Day 2	Day 3	Day 4	Day 5
First Circle	1st Read: The Three Little Pigs Patricia Sibert	1st Read: The Most Magnificent Thing Ashley Spires	1st Read: The Three Little Pigs and the Somewhat Bad Wolf Mark Teague	2nd Read: Building a House Talk about materials OR 1st Read: A House in the Woods Inga Moore Talk about simple machines and tools	2nd Read: The Three Little Pigs Patricia Sibert OR Read: The Three Little Pigs: An Architectural Tale Steven Guarnaccia (advanced)
Second Circle	Sing "Who Built a House?" ***Building Blocks*** Vol. 2 pp 310 Warm-up Count and Move Forward and Backward and As Long as My Arm.	***Building Blocks*** Vol. 2 pp 316 Warm up: Listen and Copy and Snapshot. My Dream Playground Kate M Becker	Sing "Song, Hammer, Tape Measure" to tune of Head, Shoulders, Knees & Toes. Pull a tool from the tool box and have children label it. Encourage children to make up a movement and sound that correspond to each tool.	2nd Read: The House in the Meadow Shutta Crum Rhyming and counting backwards. ***Standards:*** ***PKCC***	***Building Blocks*** Vol. 2 pp 318 Warm-up: Count and Move Forward and Backward and How Many Now? Hidden Version.
Handwriting Without Tears	Favorite Activity	I Know My Numbers 8 Booklet, 2 weeks to complete	Letter & Number Play for 8 and N	Favorite Activity	Drawing Draw with Line It Up, p.45
	Counting & Numbers Wet-Dry- Try for 8, p.174-174	Counting & Numbers Legs 2-4-6-8, p.191	**Writing** Pre-Stroke for N. p.158	**Writing** Letter N, p.159	**Writing** Shape Review, p.160

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Introduction to Centers	Day 1: Introduce the idea of constructing a marble maze at circle. Talk about how children can use boxes and tubes to make ramps to roll the marble down. Show children how to make shapes using materials in manipulative area. Show how they can follow plans for making a shape using the number of side, edges, and corners to help them follow the plan. Day 1 or Day 3: Demonstrate how to play "Transform 3D Shapes" if placing in the manipulatives center, may want to add pictures of three-dimensional shapes as cards to help children play the game.		
Mathematics Small Group 2 times per week		***Building Blocks*** Vol. 2 pp 312. How Many Now? Hidden Version and X ray Vision 1 pp 313.	
Language Literacy Small Group 2 times per week	Letter play and Tools Activity ***Standards:*** ***MA.RF.2.b & 2c***		
Discovery	Golf tees, hammers use, large screws and plastic screwdrivers. Styrofoam of difference densities. Use tools and goggles. For example, hammers, screws and screwdrivers, pliers and claws on hammer. Hammer and remove nails and screws from Styrofoam. Encourage children to use vocabulary discussed and to label tools and actions. Example: "I am pulling the nail out with the claw of the hammer." Extend what children say and promote multiple turns in a conversation. ***Standards:*** ***MA.L.5.c*** ***MA.L.6***		
STEM	Design Challenge: Lesson Plan Format Part 2 Selecting Materials: Link to reading of <u>The Most Magnificent Thing.</u> Encourage children to think about materials they will need for construction and to test the strength, durability, and flexibility of various materials they are considering using for constructing their design. Adapt for a challenge: Sort materials for strength, durability, flexibility. Discuss selecting the right materials for use in constructing individual designs. Have children compare and discuss in large circle (cardboard, wood, plastic, rock, paper, ribbon, yarn, twigs, cardboard, styrofoam, tape, glue, nails, screws, staples, etc.) ***Standards:*** ***Physical Science: PreK-PS1-2 & 3*** ***2.1 & 2.2***		

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<table>
<tr><td>Manipulatives</td><td colspan="2">Talk about how when you use clay to roll a ball, it makes a sphere; that a sphere is a 3D solid, but that circles and ovals are 2D shapes - flat, with no corners.

Play “Transform.” Give each child some play dough and ask them to make the target shape. Adjust based on children’s knowledge and skills. For some, only create 2D shapes; others could make 3D shapes or discuss the difference between them by having them make both 2D and 3D shapes.</td></tr>
<tr><td>Math Center</td><td colspan="2">Concept Development: “Welcome to our Shape Factory.”
Talk about how in math we are producing shapes using straws and pipe cleaners or clay and popsicle sticks. Start with Triangles. Children who are ready for a challenge could be given three straws to cut and manipulate on their own to create their own triangle.

<u>Change, Changes</u> by Pat Hutchins and/or <u>Cubes, Cones, Cylinders and Spheres</u> by Tana Hoban

Show children pictures from one or both books, asking questions.
Student Debrief:
• Where do you see circles in the _____? Where do you see triangles?
• Look at the _____ with your partner. What is the same about the ____ and the _____? What is different?
• Ask me a question about the park scene using a position word, such as, “What is next to the _____?”

Standards:
PK.M.2.L7
PKM.2.L8
PKG3 & 4
Supporting Standards:
PKMD</td></tr>
<tr><td>Art Studio</td><td>Provide large and small boxes, paper towel, and wrapping paper tubes. Make a marble or small ball maze. Use the box to angle the tubing. Alternatively, you can have children tape tubes to a wall or shelf in manipulative or science area.
Alternative: Place paper shapes in the art center. Encourage or model how to use the shapes to create a picture or design such as a construction scene, park, etc. Ask them to describe their work using position words. For example, “The circle is above the sun. I made a house under the sun. The house is a rectangle.”

Standards:
APL.4
SEL.12</td><td>Use plans to construct design- using materials collected. Children can work in teams or individually.
Use tape, glue, staples, etc. to hold things together (e.g., clips, nails, nuts & bolts).
Have 3D containers, plastic lids, cardboard, wood scraps, egg cartons, scissors, twigs, Styrofoam, ribbon and other materials available.

Standards:
APL.4, 6 & 7
SEL.12</td></tr>
</table>

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Gross Motor			Have each child act as part of a machine. Ask each child to make a movement and a sound and join them together. When you switch the machine on, each child will start their motion and sound, adding on until the machine is completely powered. Then switch it off, and children who started first will stop first, until the only sound and movement that remains is that of the last child.		
Writing	Turn writing areas into *Design Center*. Place pencils, easer, markers, crayons, ruler, stencils, and large sheet of paper in the area. Encourage children to work individually or in teams to develop a design for a house, furnishings, or play equipment for Pete the Cat. Encourage children to rethink their designs and make revisions as they learn more from their own trial and errors. ***Standards:*** ***APL.3 & 8***				
Book Area	Look at pictures of simple block structures and follow the design. Put large paper with traced blocks in baskets in the block area to use as blueprints. Encourage children to use the plans to pretend they are at a work site. Encourage children to assign roles to crewmembers: Foreman, construction workers, dump truck drivers, roofers, landscapers, plumbers, etc. ***Standards:*** ***APL.8***				
Conversations during routines and meals	Tell me what you are constructing.	What materials are you thinking of using?	Have you thought about how you will connect your materials?	Are you working with anyone on your design?	How did you come up with your design?
Drama	The Big Dig or the Construction Sites: Use the activity lesson plan to guide your thinking about setting up the environment. Encourage children to name tools and discuss how they will be used. Encourage children to take on various roles in including foreman, carpenter, plumbers, etc. Remind them about how workers need to communicate to one another to complete the job. ***Standards:*** ***SEL.7-10*** ***MA.L.5.c & 6***				

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Blocks	Place pictures of block structure and bridges pictures in area. Trace block structures onto large paper and roll them up like blue prints and place in area with hard hats and other tools or trucks. Encourage children to assign and take on role and work as crew: Foreman, construction worker, dump truck driver, roofer, plumber, and landscaper. Add pattern blocks and pattern block activity cards to Block Center. Children will enjoy using shapes to build/compose familiar objects. This practice is all many students need to begin to see the relationship between the shapes and how larger shapes can be broken down into smaller shapes/decomposition. ***Standards:*** ***SEL 7-10*** ***MA.L.5.c & 6***
Computer &/or Listening Center	

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Week 24	Day 1	Day 2	Day 3	Day 4	Day 5
First Circle	1st Read: Night Worker Kate Banks Sing "Did You Ever See a Builder?"	2nd Read: My Dream Playground Kate M Becker	2nd Read: If I Built a House Chris Van Dusen Sing "This is the Way We Build a House" ***Standards:*** ***PK.MA.RF.2.a***	3rd Read: The House in the Meadow Shutta Crum Rhyming and counting backwards	Re-read the favorite version of The Three Little Pigs. ***Standards:*** ***APL.8***
Second Circle	***Building Blocks*** Vol. 2 pp 326. Warm-up Count and Move in Patterns and What's the Missing Step?		Sing "Building a House" ***Building Blocks*** Vol. 2 pp 330 Warm-up What's the Missing Step? And What's This Step?	***Building Blocks*** Vol. 2 pp 322. Warm-up: Ten Little Monkeys and Snapshot 2.	Teacher will read a few of the children's Three Pig Stories to the group. (These should be books made by children during week in writing)
Handwriting Without Tears	Letter & Number Play	Alphabet Knowledge Three A Day – Capitals to Say, p. 51.	Alphabet Knowledge ABC's on the Rock, Rap, Tap & Learn CD	Letter Play for V & W	Favorite Activity
	Rock, Rap, Tap & Learn CD "Alphabet Boogie"	Alphabet Knowledge Capital Lowercase Matching, p.61	**Writing** Mat Man Shapes, p.161	**Writing** Pre-stroke V & W, p.162	**Writing** Letter V, p.163
Introduction to Centers	Day 1– Remind children about the 2 or 3 versions of The Three Little Pigs read last week. Encourage them to use blank books or paper to make their own stories about the Three Little Pigs. Map language by having children sound out words they want to write. Facilitate by writing letters as children sound out the words. Encourage children to write their own words, using books, alphabet chart, and word cards as references.				
Mathematics Small Group 2 times per week	***Building Blocks*** Vol. 2 pp. 333 Small Group-What's the Missing Step? & Length Ribbons.				

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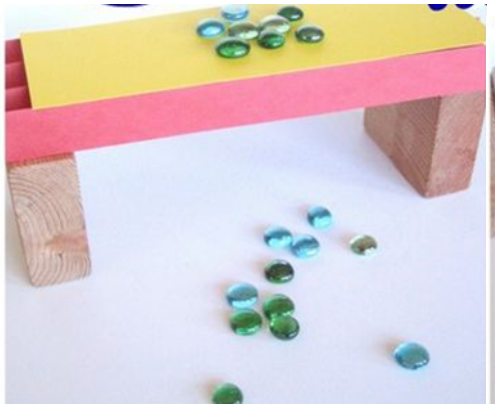
Language Literacy Small Group 2 times per week		Alphabet Under Construction Denise Fleming Show pictures of letters and have children make them using wooden craft sticks, string or yarn and/or pipe cleaners. Encourage children to select the material that will best assist them in constructing each letter. ***Standards:*** ***APL.8***	
Discovery	Golf tees, hammers use, large screws and plastic screwdrivers. Styrofoam of difference densities. Use tools and goggles. For example, hammers, screw and screwdrivers, pliers and claws on hammer. Hammer and remove nails and screws from Styrofoam. Encourage children to use vocabulary discussed and to label tools and actions. Model with self-talk if necessary (e.g., "I am pulling the nail out with hammer of the claw." Do this by extending what children say and promoting multiple turns in a conversation. *Alternative:* Center Connection: Place a set of solid objects in sensory center. Have children create their own mystery challenges by stamping one face of the solid object into sand, shaving cream, or play dough. Friends can guess which shape has been used. ***Standards:*** ***MA.L.5.c & 6***		
STEM	Bridge Stability: Materials - small wooden unit blocks (at least 4-5 rectangles and square blocks, 8-10 pieces total). Strips of poster board or other hard paper such as oak tag in various lengths, 2-3 inches wide and 6, 8 12, and 18 inches long. Small rocks or counting bears. Invite children to design and build a bridge. Use the paper as the truss and the block as the frame. Ask them to find out how many bears can be supported on a bridge of various lengths. Encourage exploration around the length of a span and the number of supports in the design of the frame. Help children discover the connection between the lengths of a bridge's span and the number of supports needed. Children can make predictions to determine how many bears or rocks can be put on the bridge before it collapses. Ask children if additional supports might change the stability and structure of the bridge. Then experiment with additional supports to hold up the bridge and compare the number of bears maintained. Talk about length and stability. Ask children to consider why the bridge might collapse with additional weight? Why are the supports needed at various spans to hold up the truss of the bridge? This will help them understand the importance of design in construction.		

	   ***Standards:*** ***APL.4, 6 & 7***	
Manipulatives	Playstick or Lincoln Logs to construct. Talk about stability. Add instruction for building with Lincoln Logs using instruction printed from website as plans. http://www.knex.com/products/lincoln-logs/building-instructions/	If children enjoy the Mystery bag containing wooden 3D shapes and pictures of real 3D objects, encourage them to play the game as in the manipulative area.
Math Center	Place out materials that build skills based on student's knowledge of 2D and 3D shapes. Perhaps, continue constructing 2D/3D figures with strays, clay, etc. OR Shape Bingo	
Art Studio	Use plans to construct designs using materials collected. Children can work in teams or individually. Tape, glue, and other items to hold things together such as clips, nails, nuts and bolts. Scissors, 3-D containers, plastic lids, cardboard, wood scraps, egg cartons, twigs, Styrofoam, ribbon and other materials available. *Alternative:* Continue to encourage students to create scenes using 2D shapes. ***Standards:*** ***SEL.12*** ***APL.4, 6 & 7***	
Gross Motor	Blocks in many shapes. Distribute one block per child. If you have foam blocks, use them. • Ask children to stand in front of one block. • Then say you are going to play musical chairs with the blocks. • Ask children to turn and tell their friend the name of the block they stand in front when the music stops. • You do not need to remove blocks to play.	

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Writing	Book making: Make own version of Three Little Pigs. Place blank books in area as well as paper for children to staple their own books together with various writing materials. Photocopy several pictures from each of the three different versions of the book, or just the covers of the book and place in the areas to remind the children of different versions read. Encourage children to create their own version of the story. Encourage children to write and phonetically spell when possible. Encourage all children to write something before taking down dictations. ***Standards:*** ***APL.3 & 8***				
Book Area	Three Pigs books for children to retell to others. Books of signs, bridges, and shapes. Children's own self-created books can be placed in the area if they choose to share them with others.				
Conversations during routines and meals	Do you know anyone that works at night? Tell me what they do.	Have you ever gone to work with your Mom or Dad? What do they do? Tell me about what you did when you went with them.	If you were to go to work with your parent, tell me about what you think you would do.	How is your construction project coming?	Ask children to generate words that rhyme with house, hammer, saw, nail, and file. Accept nonsense words.
Drama	The Big Dig or the Construction Sites: Use the activity lesson plan to guide your thinking about setting up the environment. Encourage children to name tools and discuss how they will be used. Encourage children to take on various roles in including foreman, carpenter, plumber, etc. Remind them about how workers need to communicate to one another to complete the job. ***Standards:*** ***SEL.7-10***				
Blocks	Create a worksite with dump trucks, bulldozers, and other vehicles. Place scrounge materials such as round sponges, soda caps, or foam pieces in baskets for children to use with blocks. If you have doors, window, or roof blocks, add them to the area; if not, you could add foil, felt, cardboard or fabric covering to some blocks to make them stand out for doors or windows.				
Computer &/or Listening Center					
Other					

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Week 25	**Day 1**	**Day 2**	**Day 3**	**Day 4**	**Day 5**
First Circle	2nd Read: The Three Little Pigs and the Somewhat Bad Wolf Mark Teague	2nd Read: The Most Magnificent Thing Ashley Spires	2nd Read: Old Macdonald Had a Woodshop Lisa Shulman ***Standards:*** ***SEL.12*** ***MA.RS.8.a***	2nd Read: Night Worker Kate Banks ***Standards:*** ***PK.MA.R.2 & 3.***	1st Read: A House in the Woods Inga Moore ***Building Blocks*** pp. 350. I'm Thinking of a Number (Length) Talk about simple machines and tools.
Second Circle	Put various tools in a feely box. Have children a tool out of the box, labeling it before pulling it out. Challenge: If children are able to, ask them to tell you what letter is at the start of the word. If children can do that successfully, ask them to generate other words that start with the same sound (e.g., saw/son).	Sing "Johnny Works with One Hammer" *Building Blocks* Vol. 2 pp. 342 Warm-up: Measure Length & X Ray Vision 2.	Sing "Old Mac Donald Had a Tool Belt" *Building Blocks* pp. 344 Warm- Up Blast Off & Mr. Mixup's Measuring Mess.	Sing "The Ants Go Marching" *Building Blocks* Vol 2 pp. 346 Warm up Ten Little Monkeys & I'm Thinking of a Number (Length).	3rd Read: The Night Worker Talk about jobs that people have at night time and what things they fix at night. Roadway, bridges, schools, stores, etc. Who else works at night and why? ***Standards:*** ***PreK-K.8***
Handwriting Without Tears	Counting and Numbers Wet-Dry-Try for 9, pp.174-175	I Know My Numbers 9 Booklet, 2 weeks to complete, p.197	Letter & Number Play for 9 and/or V & W	Letter Play for X	Rock, Rap, Tap & Learn CD "Sliding Down to the End of the Alphabet"
	Count and Numbers Nine – 9, p.192	Counting & Numbers 1-2-3 Touch & Flip Cards, p.195	**Writing** Letter W, p.164	Alphabet Knowledge Capital & Lowercase Letters, p.59	**Writing** Letter X, p.165

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Introduction to Centers	See Lesson Resource: Introduce the idea of constructing a Pyramid to the group. Talk about how the group has become great at designing, selecting materials, and constructing, and that everyone will need to work together to construct the pyramid. Ask children to tell you how to make a triangle. Then show them three paper rollers. Ask children to help you using their words to join the three paper rolls together to form a triangle. Have three other triangles already made but hidden. Ask children how help you count the number of faces on a pyramid. 5 faces: 4 triangular and 1 square face. Then count all 8 edges. Then count the 5 vertices. Encourage children to help you build as many triangular prisms or pyramids as possible so that next week you can try to construct a pyramid in dramatic play as a final project.		
Mathematics Small Group 2 times per week	***Building Blocks*** Vol. 2 pp. 348 Length Riddles & X- Ray Vision ADAPT lesson: Use children's design plans to talk about shapes and landmarks. Focus on the position of 2D shapes in their design plans to stand for solid shapes used to create their construction.		
Language Literacy Small Group 2 times per week		Alphabet Bingo: Print appropriate boards for group. http://bogglesworldesl.com/alphabetbingo.htm Assess student letter identification knowledge.	
Discovery	Foam 3D blocks and foam soap or "floam" as mortar to build structures. Provide a plastic putty knife (free at most hardware stores) to spread the floam. Floam recipe: http://chemistry.about.com/od/chemistryhowtoguide/ht/floam.htm OR Place large glitter in ice cubes and have children build with ice cubes using large tweezers to stack and move ice cubes.		
STEM	Invention Station: Inventions are things created to serve a purpose. See Lesson Plans & Resources for station ideas. Step 1. Idea Step 2. Make a sketch Step 3. Select materials and create Step 4. Apply for a Patent Place materials out in the area such as pipe cleaners, craft sticks, egg cartons, Styrofoam trays Provide patent application in area. Take photographs of children's completed invention. ***Standards:*** ***SEL 10*** ***APL 3 & 4***		

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Manipulatives	Place newspaper, tape, and scissors out on a table; encourage children to roll newspaper into long tubes and to tape them to make them sturdy. Explain to children that after they have created enough building materials your class is going to try to construct a pyramid with them. See picture in Module 4 Paper Pyramid Week 5 and 6. 
Math Center	2D shapes: Make shapes with craft sticks with Velcro dots on the end. 3D shapes: Make shapes with straws and marshmallows/playdough.
Art Studio	Tracing 3D Shapes, 2D foot prints (Shapes- Art) 1. Trace and name shapes 2. Trace, name and match shapes 3. Discuss sides, corners, and faces
Gross Motor	Go on a bear hunt around the city. See resource.
Writing	Display a few construction theme books with city signs. Suggestion for books to add to area include: City Signs by Zoran Milich, I Read Signs by Tana Hoban, or Signs in My Neighborhood by Shelly Lions. Provide baskets containing different paper shapes (circles, rectangles, squares, and triangles). Children can make signs and tape craft sticks to the back and place the sticks in a paper cup to keep them standing. Signs can be used in block area at construction site. ***Standards:*** ***APL.3***

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Book Area	Three Pigs books for children to retell to others. Books about signs, bridges, and shapes. Children's own self-created books can be placed in the area if they choose to share them with others.
Conversations during routines and meals	Do you visit the invention station? Tell me about what you are inventing. How have you contributed to our group project and helped us to get all our building materials together? Encourage children to find various 2D and 3D shapes in the classroom by directing others to find them by describing the location (I Spy). For example, "I spy a cylinder near the door, below the clock."
Drama	The Big Dig or Construction Sites: Use the activity lesson plan to guide your thinking about setting up the environment. Encourage children to name tools and discuss how they will be used. Encourage children to take on various roles in including foreman, carpenter, plumber, etc. Remind them about how workers need to communicate to one another to complete the job. ***Standards:*** ***SEL.7-10***
Blocks	Create a construction site with dump trucks, bulldozers, and other vehicles. Provide scrounge materials such as round sponges, soda caps, or foam pieces in baskets for children to use while building with blocks. If you have doors, window, or roof blocks, add them to the area; if not, you could add foil, felt, cardboard or fabric covering to some blocks to make them stand out for doors or windows.
Computer &/or Listening Center	
Other	

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Week 26	Day 1	Day 2	Day 3	Day 4	Day 5
First Circle	3rd Read: What Do You Do with an Idea? Kobi Yamada ***Standards:*** ***PK.MA.R.2 & 3***	2nd Read: A House in the Woods Inga Moore ***Building Blocks*** Vol 2. pp 358. Warm-up: Blast Off & Puzzles.	2nd Read: The Most Magnificent Thing ***Standards:*** ***SEL.12*** ***PK.MA.R.2 & 3***	3rd Read: My Dream Playground Kate Banks	Act out children's favorite version of the Three Little Pigs. ***Standards:*** ***PK.MA.R.2 & 3***
Second Circle	*Straight OR Curved See Lesson Plan **Test out construction:** Let 4 children share their constructions with the group. Test out if a stuffed animal can use it.	Questions for discovery See Resources	***Building Blocks*** Vol. 2 pp 360. Warm-up: Blast Off and I 'm thinking of a Number. Test out construction. Let 4-5 children share their constructions with the group. Test out if a stuffed animal can use it.	Show pictures of famous buildings in the United States and talk about them and other national monuments. Talk about these as symbols of our history and country. OR Pick favorite book from the unit or read children's books See resources. ***Standards:*** ***PreK-K7***	***Building Blocks*** Vol. 2 pp. 362 or 366. Warm-up: I Spy and Guess My Rule Test out constructions. Let 4-5 children share their constructions with the group. Test out if a stuffed animal can use it.
Handwriting Without Tears	Counting & Numbers Wet-Dry-Try for 9, pp.174-174	Letter & Number Play for 9 and/or Y	Favorite Activity	Letter Play for Y & Z Alphabet Knowledge Lowercase Letters on the Edge, p.56	Favorite Activity
	Counting & Numbers 1-2-3 Touch & Flip Cards, p.195	Alphabet Knowledge Name That Capital, p.53	**Writing** Letter Y, p.166	Alphabet Knowledge Lowercase Letters on the Edge, p.56	**Writing** Letter Z, p.167

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Introduction to Centers	**Day 1:** Remind children that this is the last week of the unit. Explain that everyone will have a chance, if they want, to talk about what they designed and share their construction with the group. (Might have a sheet with children's names posted for each day of the week to help them know when their turn will be.) Let them know they can test it with Pete the Cat or a classroom stuffed animal if they would like. Remind children to help create needed building materials for construction of the pyramid that you hope to finish on Day 5. ***Building Blocks*** pp. 358 Puzzles – place in math center. Puzzle 1 – Teacher Resource Guide pp. 132		
Language Literacy Small Group 2 times per week		Race to the Letter Lesson Plan ***Standards:*** ***MA.2.b & 2c***	
Mathematics Small Group 2 times per week	***Building Blocks*** Vol. 2 pp. 360 What's the Missing Card? And Pattern Block Puzzles.		
Discovery	Foam 3D blocks and foam soap OR Floam as mortar to build structures. **OR** On tray or in the sensory table-free objects such as counting bear, car, wood into block of ice. Have children use plastic tools such as chisels or saws to excavate the items inside. **OR** Water with plastic tubing, turkey basters, eyedroppers, cork, and foam pieces. Cut some holes in tubing to create leaks for the plumbers to fix. Provide pretend wrenches and pliers.		
STEM	Invention Station: Inventions are things created to serve a purpose. Step 1. Idea Step 2. Make a sketch Step 3. Select materials and create Step 4. Apply for a Patent Provide materials in the area such as pipe cleaners, craft sticks, egg cartons, Styrofoam trays Provide patent application in area. Take photographs of children's completed inventions. ***Standards:*** ***APL.3 & 4***		
Manipulatives	Craft sticks with Velcro® dots. Children can use to make shapes and letter. Make it into a game by placing card to turn over and make the shape. Have peers validate construction. Place some letters with curves in the pile and talk about why you cannot make those shapes with just the straight craft stick.		
Math Center	Puzzle – pattern blocks pp. 132 Teacher Resource *Building Blocks*		

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Art Studio	Print with nuts and bolts.	My Homes: Art activity- Encourage children to make homes or monuments.
Gross Motor	Bear Hunt: See week 5.	Have each child act as part of a machine. Ask each to make a movement and sound and join them together. When you switch on the "machine" each child will, in turn, start their motion and sound, adding until the machine is completely powered. Then you will switch it off and again in turn, children will stop until the only sound and movement that remains is that of the last child.
Writing	Encourage children to make books about what they would invent or what type of buildings they would like to build.	
Book Area	Books about three-dimensional shapes. Informational text about buildings such as Pyramid, Underground, Castle, City: A Story of Roman Planning and Construction David Macaulay	
Conversations during routines and meals	Do you think we will be able to construct a pyramid in our classroom? How do you think we will construct it? What should be used to connect the shapes?	
Dramatic Play	Begin construction of pyramid with paper triangles, connecting them together. 3 squared on bottom. Second tier of prisms point facing down. Total needed: 16. Next level with 2 squared on bottom. Second tier of prisms point facing down. Then third tier 2 bottom and 2 facing down, Finally, top vertex. Need 32 prisms total. Might have both groups in half-day program work on same pyramid.	
Blocks	Create a construction worksite with dump trucks, bulldozers, and other vehicles place scrounge materials such as round sponges, soda caps, or foam pieces in baskets for children to use to move and build with blocks. If you have doors, window, or roof blocks, add them to the area; if not, you could add foil, felt, cardboard or fabric covering to some blocks to make them stand out for doors or windows.	
Computer &/or Listening Center		
Other		

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Appendix

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Supporting Motor and Neurosensory Development

The large muscles of the body are critical to supporting the small muscles in the hands and fingers. If we want children to be able to hold a pencil and eventually write words and stories, they need to have the strength, flexibility, and coordination in all the muscles involved in the task. In addition, children need to develop skills that build their perception, in order to understand concepts such as up, down, over, under, beside, right and left, all of which are fundamental to learning to read and write.

Key motor and neurosensory skills include:

- **Crossing the midline**: The ability to cross the midline of the body is related to both reading and writing (moving smoothly from the left side of a page to the right and back again). It can be fostered by providing activities that promote arm movements that smoothly cross the midline, such as using a large chalkboard or whiteboard, or easel paper, to make large movements from left to right. It is also supported by providing two containers on either side of the body and having children transfer objects from one container to the other.
- **Directionality**: Children learn directionality and position in space through their own body experiences. They need to be able to understand and "feel" concepts of up, down, over, under, right and left, in order to be able to distinguish directionality in letters (e.g., the difference between a lower case p, d, b, and q). Spatial knowledge is critical to writing – the positioning of the shapes of specific letters within words can be complex, for example, in a word like "gargoyle" the letters extend above and below the writing line, and there are vertical, horizontal and diagonal components.
- **Visual perception and visual discrimination**: Visual discrimination refers to the ability to differentiate one object from another. For example, there may be two pictures on a page with small differences and a child must be able to distinguish the differences. These skills are supported and reinforced by sorting and matching activities that involve discriminating among a number of elements (e.g., blocks, beads, popsicle sticks, pegs on a pegboard), and reproducing patterns/arrangements. These kinds of activities also support mathematical thinking. The visual arts can be used to build many spatial, visual perception, visual discrimination, and visual motor skills.
- **Visual motor skills:** These skills are also referred to as hand/eye coordination, and include the ability to reproduce/represent shapes on paper. There are many materials and activities that can be used to build visual motor skills, such as:
    - Following a line on paper with a crayon or marker;
    - Pushing a car/train along a "track" ("streets" can be drawn on a long piece of paper);
    - Using tools such as hammering nails;
    - Stringing beads or macaroni on a string to make necklaces;
    - Using blunt plastic needles to "sew" in and out of holes punched around a paper plate or through small squares of plastic needlepoint material;
    - Rolling, tossing, and catching beanbags or foam balls of various sizes;

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Gross Motor Development

As young children move their bodies, learn many concepts through their senses (sensory motor integration), so they need to be provided with many sensory-motor experiences that integrate body movements with the senses (tactile/touch; smell; hearing; taste; sight, and kinesthesia/ movement). These include visual-motor activities that integrate visual information with fine- and gross-motor movements (e.g., tossing, striking, kicking, and catching objects).

It is important to develop the upper body of shoulders and arms in order to support the smaller muscles in the hands and fingers (needed for writing). Physical development and outdoor play using large equipment are prime opportunities for intentionally supporting this development. Movement challenges can also be embedded in indoor activities that involve postural control, coordination of movements, and locomotion (e.g., crawling, creeping, body rolling, jumping).

Use of large equipment can help children to strengthen the upper body (e.g., push-ups and pull-ups, monkey bars, climbing through tunnels, obstacle courses, seat scooters). Upper body strength/control can also be built with pushing/pulling equipment such as wagons, or carrying a tray full of leaves with both arms, or movement activities such as making large, sweeping movements and circles using the entire arm. Using easels or wall-mounted chalkboards or white boards to make designs can also strengthen these muscles.

Fine Motor Development/Hand Skills

Hand Skills such as strength and dexterity begin with manipulatives. Young children need to spend more time with fine-motor manipulatives than with writing utensils, because their hands may not be ready for such refined activity. Many activities typically found in preschool classrooms are appropriate for building hand strength and dexterity. Examples of manipulative activities include:

- Using a hand hole punch to punch holes in increasingly heavy papers;
- Rolling, molding, squeezing clay and playdough using with hands or fingertips;
- Screwing lids on and off jars, screwing pipe fittings together, or assembling nuts and bolts;
- Building with large Lego blocks (Duplos) or other assembly toys;
- Picking up objects using household tools such as tongs;
- Using tweezers or “strawberry hullers” to pick up small objects such as cotton balls or paper clips and transferring them from one container to another;
- Picking up small objects such as buttons using pincer grasp (thumb and forefinger);
- Scooping small objects such as beans with a spoon and pouring into containers;
- Filling a turkey baster with water, or squeezing water out of sponges in the water table;
- Clipping clothespins around the perimeter of paper plates;
- Using an eyedropper to drop colored paint or water onto paper;
- Playing with toys with small parts such as Lite-Brite or pot holder looms;
- Matching parquetry blocks to fit within outlines.

Scissor Skills

At the preschool level, it is important to guide children in proper grasp of scissors. When scissors are held correctly, and when they fit a child's hand well, cutting activities will exercise the same muscles needed to manipulate a pencil in a proper grasp. The correct scissor position is with the thumb and middle finger in the handles of the scissors, with the index finger on the outside (under) the handle to stabilize, and the fourth and fifth fingers curled into the palm. Many children hold scissors with the thumb and index finger in the handles, which does not allow for efficient control. Parents and teachers can help to teach appropriate grasp of scissors.

Scissors activities can be adapted to children of varying skill levels, such as:

- Snipping a fringe from a piece of paper;
- Cutting off corners of a piece of paper;
- Cutting along curved lines;
- Cutting along lines with a variety of angles;
- Cutting figures with curves and angles;
- Cutting clay with blunt scissors.

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Work Surfaces

One of the most crucial things that can be done for preschoolers is to provide vertical or inclined surfaces to work on (wall-mounted surfaces or easels). In this position, the wrist is properly positioned to develop stability and skillful use of finger muscles. When working on a flat or horizontal surface, children tend to straighten or flex their wrists, which interferes with proper use of small muscles in the hand. Many activities can be adapted for use on a vertical surface by using book holders on a table, tabletop easels, or floor easels.

Embedding Neurosensory Activities in Daily Routines

Many fine motor activities can be provided in the form of interest centers that children can revisit on an ongoing basis with self-challenges, in which children are encouraged to constantly better their own previous "records." When such activities become part of children's daily routines, children engage in constant practice, further refining their skills.

Keep in mind that it's not enough to just have materials and tools available. The key is ensuring that the materials are used regularly, facilitating the use of materials, and observing each child to determine how the materials can best be used for individual development.

There is much to be gained by connecting with the occupational therapists in your school, in terms of observing and assessing children's individual needs, along with providing activities to benefit all children's developmental skills.

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SUPPORTING THE NEEDS OF DUAL LANGUAGE LEARNERS

Module WIDA/MPI: "At the very beginning stages of English language development, dual language learners typically understand more words than they are able to produce. Children may be non-verbal in English and rely primarily on their home language and/or gestures to communicate their needs, wants, and ideas." Children at all levels of English language development ANALYZE feelings from transitioning to school and separating from caregivers by pointing to emotion boards, identifying characters in stories with similar emotions, and distinguishing between emotions among peers/adults and characters in stories. *More samples can be found in the WIDA_2014 EELD document which can be accessed at https://www.wida.us/standards/EarlyYears.aspx.*

WIDA Language Criteria: Linguistic Complexity and Language Usage

Entering: *Level 1 Ages 2.5 – 3.5*

- Words & repetitive phrases related to daily routines
- An idea within simple questions or statements related to self, familiar people, or daily routines
- Repetitive phrases associated with daily routines
- Yes/no questions related to self, familiar people, and/or daily routines
- Words associated with familiar environments

Entering: *Level 1 Ages 3.5 – 4.5*

- Words and phrases related to daily routines
- An idea within simple questions or statements related to familiar environments
- Repetitive phrases & simple statements associated with daily routines
- Yes/no questions related to self, familiar people, and/or daily routines
- Words and expressions associated with familiar environments

Entering: *Level 1 Ages 4.5 – 5.5*

- Words and longer phrases related to daily routines and learning activities
- An idea within simple questions or statements related to familiar environments
- Repetitive phrases & simple statements associated with daily routines
- Yes/no questions related to self, familiar people, and/or daily routines
- Vocabulary associated with familiar environments & learning activities

Developing: *Level 3 Ages 2.5 – 3.5*

- Related phrases and simple sentences
- An idea with one detail
- Short sentences related to daily routines, familiar people, songs, and stories
- Repetitive phrasal patterns related to daily routines and familiar stories
- General vocabulary related to daily routines and familiar stories

Developing: *Level 3 Ages 3.5 – 4.5*

- Multiple related simple sentences; "wh-questions"
- An idea with two details
- Short and some compound sentences related to familiar stories and learning activities.
- Sentence patterns related to familiar stories and learning activities.
- General and some specific vocabulary related to daily routines, familiar stories, and learning activities.

Developing: *Level 3 Ages 4.5 – 5.5*

- Multiple related extended sentences
- Related ideas
- Compound and some complex sentences related to familiar stories and learning activities
- Sentence patterns related to specific learning activities and stories
- General and some specific vocabulary associated with familiar environments and learning activities

Bridging: *Level 5 Ages 2.5 – 3.5*

- Series of simple sentences related to familiar stories or events
- An idea with one to two details; one-step direction related to daily routines
- Short and compound sentences related to daily routines, familiar people, songs, and stories
- General and some specific vocabulary associated with familiar environments and stories (move above heading)

Bridging: *Level 5 Ages 3.5 – 4.5*

- Series of extended sentences related to familiar stories, learning activities, or events.
- Related ideas; two-step directions related to daily routines
- Compound and some complex sentences related to familiar stories and learning activities.
- Specific vocabulary associated with stories, learning activities, and various environments.

Bridging: *Level 5 Ages 4.5 – 5.5*

- Sentences/questions of varying richness and complexity related to familiar stories, learning activities, or events
- Expanded related ideas; two to three step directions and some new directions related to daily routines
- Complex sentences and language patterns related to familiar stories and instructional activities
- Specific and some technical vocabulary associated with various environments and learning activities

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MODULE 4 Week 22 activity	TSG Connections
If We Built a House Class Book	Objectives: 9, 19, 33
BB Week 19	Objectives: 11, 12, 20, 22
HWT Week 20	Objectives: 7, 19
Wet sand with various containers	Objectives: 26
Balance scale	Objectives: 22, 24
Attribute blocks with cards	Objectives: 21, 23
Trace 3D containers	Objectives: 7, 21
Shape collage	Objectives: 21
Shapes on floor, hopscotch	Objectives: 6, 21
Picture word cards of shapes and tools	Objectives: 3, 21
Dramatic play-construction site	Objectives: 2, 30, 36
Build Bridges in blocks	Objectives: 21, 24

MODULE 4 Week 23 activity	TSG Connections
Shape Simon Says	Objectives: 1, 21
Tangrams	Objectives: 21, 23
BB Week 20	Objectives: 11, 22
HWT: Week 21	Objectives: 7, 19, 20
Letter cards and white boards	Objectives: 16, 19
Sort shapes	Objectives: 13, 21
3D shapes	Objectives: 13, 21
Paint with 3D solids	Objectives: 21, 33
Make shapes with straws and play-doh	Objectives: 7, 14, 21
Simon Says with positional language	Objectives: 1, 8
Design center	Objectives: 7, 21
Structure book in block area	Objectives: 21, 26

MODULE 4 Week 24 activity	TSG Connections
Letter play and tools	Objectives: 16, 19
Golf tees, hammers, Styrofoam	Objectives: 7
BB Week 21	Objectives: 20, 23
HWT Week 22	Objectives 7, 19
Design challenge 2	Objectives: 7, 21
2D and 3D shapes with clay	Objectives: 7, 21
Marble mazes	Objectives: 11, 21
Act like a machine	Objectives: 6, 14
Design a house for Pete the Cat	Objectives: 19, 30
Bridges in block area	Objectives: 11, 24
Pattern blocks with activity cards	Objectives: 23

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MODULE 4 Week 25	TSG Connections
Create letters using craft materials	Objectives: 16, 33
Build bridges with paper, etc	Objectives: 11, 24
BB Week 22	Objectives: 11, 22
HWT Week 23	Objectives: 7, 19, 20
Shape bingo	Objectives: 3, 21
3D designs using recycled materials	Objectives: 21, 33
Musical chairs	Objectives: 1, 6
Make your own *Three Little Pigs* book	Objectives: 18, 19
Create worksites in block area	Objectives: 30, 36

MODULE 4 Week 26	TSG Connections
Tools in feely box	Objectives: 11, 13
Alphabet bingo	Objectives: 3, 16
BB Week 23	Objectives: 11, 12, 21
HWT: Week 24	Objectives 7, 19, 20
Foam blocks or ice cubes for stacking	Objectives: 24
Invention station	Objectives: 19, 24
Pyramids with rolled paper	Objectives: 11, 24
Trace 2D and 3D shapes	Objectives: 7, 21
Going on a bear hunt	Objectives: 1, 6
Making city signs with shapes	Objectives: 19, 21, 32

MODULE 4 Week 26	TSG Connections
Straight or curved	Objectives: 11, 16
Race to the letter	Objectives: 6, 16
BB Week 24	Objectives: 11, 20
HWT Week 25	Objectives: 7, 16, 19
Excavate objects in sand table	Objectives: 3, 13
Craft sticks/Velcro dots to make letters	Objectives: 7, 16
Printing with nuts and bolts	Objectives: 28, 33
Make homes with recycled materials	Objectives: 30, 33
Student machine	Objectives: 6, 12
Pyramid construction with paper tubes	Objectives: 24

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Booksheets

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Module 4 We All Have Ideas!
Book List

Alborough, J. (2002). *Fix-It Duck,* Harper Collins
Banks, K. (2007). *The Night Worker*. Canada: Sunburst Book Farrar, Straus and Giroux
Barton, B. (1981). *Building a House*. Washington, DC: Teaching Strategies
Becker, K. (2013). *My Dream Playground*. Somerville, MA Candlewick Press
Crum, S. (2003). *The House in the Meadow*. A. Whiteman
Dean, J., (2015). *Pete the Cat: Construction Deconstruction*. New York NY: Harpers Collins Publishers
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Gibbons, G. (1990). *How a House is Built*. New York, NY: Holiday House.
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Guarnarccia, S. (2010). *The Three Little Pigs Architectural Tale*. New York, NY: Abrams
Hoban, T. (2000). *Cubes, Cones, Cylinders and Spheres*. Greenwillow Books
Hutchins, P. (1971). *Changes, Changes*. New York, NY: Macmillan
Macaulay, D. (1973). *Cathedral: The Story of Construction*. Boston, MA: Houghton Mifflin
Macaulay, D. (1975). *Pyramid*. Boston, MA: Houghton Mifflin
Macaulay, D. (1976). *Underground*. Boston, MA: Houghton Mifflin
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Mayo, M. (2006). *Dig, Dig, Digging*. New York, NY: Henry Holt
Moore, Inga (2011). *A House in the Woods*. Somerville, MA: Candlewick Press
Portis, Antoinette (2006). *Not a Box*. New York, NY: Scholastic
Seibert, P. (2002). *The Three Little Pigs*. Greensboro, NC: Carson Dellosa Publishing LLC
Shulman, L. (2002). *Old MacDonald had a Workshop*. New York, NY: Puffin Books
Spires, A. (2014). *The Most Magnificent Thing*. Tonawanda, NY: Kids Can Press
Teague, M. (2013). *The Three Little Pigs and the Somewhat Bad Wolf*. New York: Scholastic.
Van Dusen, C. (2012). *If I Built a House*. New York, NY: Dial Books, Penguin
Wells, R. (1996). *How Do You Lift a Lion*. Morton Grove, Ill: Albert Whitman & Company
Yamada, K. (2013). *What do you do with an Idea?* Seattle, WA: Compendium Inc.

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What Do You Do with an Idea? Author: Kobi Yamada
Illustrator: Mae Besom

Suggested Vocabulary:
Idea: Thought or a schema – something you think or imagine doing or designing by thinking about it in your mind
Protect: To keep safe
Fragile: Something easily broken

Purpose	This text is read to encourage children to explore, think about, and generate ideas for making the world a better place. Lots of inventions, designs, and discoveries human have made come from ideas that people have nurtured by focusing their time, attention, and sharing them with others.		
Read the Story	This book is about learning about your world by exploring your ideas.		
Cover	Read the title, **What Do You Do with an Idea?** Tell children that the book is written by Kobi Yamada. Tell the children that the book is illustrated by Mae Besom.		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
Title -page	Read and ask children if anyone knows what an idea is? Discuss calling on 2-3 children. Then define the word **idea** as a thought or a schema; something you think or imagine doing or designing by thinking about it in your mind.		
Page 1-2			
Pages 3-4	After reading text, define **fragile**- something easily broken. Things made of glass can be fragile as they break easily.		
Pages 5-6			
Page 7-8		Read text then ask Have you ever been worried about what someone would think about an idea you had?	
Pages 9-10	After reading. clarify the meaning of magical in the text by reframing it. The boy's idea seems wonderful to him and it made him feel happy.		

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Pages 11-12		How do you feed an idea?	
Pages 13-14	Why do you think it grew bigger? After children share ideas, reframe comments summarizing how the time and attention focused on his ideas made it grow.	Do you think it grew bigger because he spent more time focused on thinking about his ideas?	
Pages 15-16			Turn and talk to a friend. Share an idea you had that you were afraid to share with others?
Page 17-18		"I actually thought about giving up on my idea?" What do you think this means?	Have you ever wanted to give up on idea?
Pages 19-20	The boy **protected** his idea- by keeping it safe, caring for it, and feed it more thoughts. To **protect** something is to keep it safe.	Why do you think his attention protected and help his idea to grow?	Why do you think you should nurture your ideas rather than give up?
Pages 21-22			
Pages 23-24		Do you think dreams are like ideas?	
Pages 25-26	What do you think it means to think big and think bigger?		
Pages 27-28			
Pages 29-30		What do you think it mean to have an idea take flight?	
Pages 31-32	Why is the idea now a part of everything?	Can you think of ideas that have changed the world?	Turn and talk to a friend do share how you think your idea could change the world if you nurtured it?
Discussion Questions:	Facilitate a conversation about children ideas. Show a box and ask children to generate ideas regarding how to use the box? • Tell me about your ideas. • How are dreams and ideas similar? • What have you thought about creating because of an idea you had? When you plan, what do you think about? Use the conversation as an opportunity to discuss how to deal with frustration. • The girl in the book took a break. • Then she continued to try until she succeeds. • What do you do when you're frustrated to make yourself feel better?		

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Building a House
Author & Illustrator: Byron Barton

Suggested Vocabulary:
Machine: A piece of equipment with moving parts that works when it is given power from electricity, gasoline, etc. Bulldozers are *machines*
Builder: A person whose job it is to build or repair houses or other buildings
Cement Mixer: A truck with a large barrel that turns round and round, mixing cement, water, and small stones to make concrete
Cement: A mixture of water, sand, and small stones to make concrete
Concrete: A mix of cement, water, sand, and small stones that hardens into a strong building material. Sidewalks, foundations, and highways are all made of *concrete*. Foundations, sidewalks, and sometimes stairs are made of concrete
Bricklayer: A person whose job is to build walls, houses, and other structures with bricks
Brick: Blocks of baked clay used as building material
Foundation: Usually stone or concrete structure that supports a building from underneath
Carpenter: A person who builds things with wood and repairs wooden things
Fireplace: An open area in a wall at the bottom of a chimney where a fire can be built
Chimney: A part of a building that sticks up above the roof through which smoke rises into the outside air
Plumber: A person that installs pipes and fix things that carry water such as sinks, toilets, or water pipes
Electrician: A person that installs wires and work on and repairs electrical equipment
Painter: A person that paints

Purpose	Build vocabulary, sequencing of steps to build a house, learn about building a house (i.e. tools and machines needed, the process, and jobs related to building a house). This book explains step by step how a house is made. It contains minimal text. The text provides an opportunity to bring awareness to the words in print. The children can narrate what they see happening in the pictures. This is a good book to use for building vocabulary and sequencing.		
Read the Story	A machine digs a big hole. A cement mixer pours cement. Carpenters put up walls. Bricklayers, electricians, plumbers, and painters all do their part to build the house.		
Cover	Read the title: *Building a House*. Tell the children that the book is written and illustrated by Byron Barton (author and illustrator). I wonder what kind of house this is going to be. How do you think they are going to build this house? Let's read to find out if we are right.	Do you remember the title of this book? Who are they building the house for?	Can you read the title of this book?
Page Number	**1st Reading**	**2nd Reading**	**3rd & 4th Reading**
1-2	On a green hill		What do you think the workers are doing on the green hill?
3-4	A machine digs a build hole		

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5-6	**Builders** hammer and saw. **Builder:** A person whose job it is to build or repair houses or other buildings	Do you remember what the builders building?	Did you ever see a house being built?
7-8	A **cement mixer** pours **cement.** **Cement Mixer:** A truck with a large barrel that turns round and round, mixing cement, water, and small stones to make concrete **Cement:** A mixture of water, sand, and small stones to make concrete.	**Concrete** is a mix of cement, water, sand, and small stones that hardens into a strong building material. Provide examples of things that are made of concrete (i.e. sidewalks, foundations, highways, some stairs/steps).	Can you tell us some things that are made of concrete?
9-10	**Bricklayers** lay large blocks. **Bricklayer:** A person whose job is to build walls, houses, and other structures with bricks **Brick:** Blocks of baked clay used as building material	What do you see the bricklayers doing?	They are building a **foundation** with the bricks. **Foundation:** Usually stone or concrete structure that supports a building from underneath
11-12	**Carpenters** come and make a wooden floor. **Carpenter:** A person who builds things with wood and repairs wooden things		
13-14	They put up walls.		
15-16	They build a roof.		What are some other things that carpenters can build?
17-18	A **bricklayer** builds a **fireplace** and a **chimney** too. **Fireplace:** An open area in a wall at the bottom of a chimney where a fire can be built **Chimney:** A part of a building that sticks up above the roof through which smoke rises into the outside air	What else did the bricklayers build? (refer back to pages 9-10)	
19-20	A **plumber** puts in pipes for water. **Plumber:** A person that installs pipes and fix things that carry water such as sinks, toilets, or water pipes	What else does a plumber do?	Has a plumber ever fixed anything in your home?

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21-22	An **electrician** wires for electric lights. **Electrician:** A person that installs wires and work on and repairs electrical equipment		
23-24	**Carpenters** put in windows and doors?	What else did the carpenters build? (Refer to pages 11-12)	Have you ever seen a house being built? Tell us about it.
25-26	**Painters** paint inside and out. **Painter:** A person that paints		
27-28	The workers leave.		
29-30	The house is built.	Look at the picture. Who do you think is in the car? What kind of truck do you think it is?	
31-32	The family moves inside.	Who is taking the furniture out of the truck? What is their job?	Have you ever moved to a new house? Who helped you move?
Discussion Questions:	How do you build a house? How many people do you think are needed to build a house? Can one person build a house all by him/herself? What type of materials are used to build houses? Who helps to build a house? How do the workers work together to build a house? Discuss what a bull dozer driver does, what a dump truck driver does, what a planner does, what an architect does, what a bricklayer or concrete layer does, what a carpenter or framer does, what an electrician does, what a plumber does, what a painter does, what a landscaper does, etc. Discuss the types of houses the children see in their neighborhood. What are these houses built from? Did you ever build something before? Tell us about what you built? What tools did you use? Did you ever help someone build something? What did you help build? What is the 1st thing the builders needed to do to before building the house? What is the 2nd thing etc.?		

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If I Built a House
Author and Illustrator: Chris Van Dusen

Suggested Vocabulary:
Unique: Special, not like anything or anyone else
Function: The particular purpose of a person or thing
Robotic: A machine that automatically performs a difficult task
Spool: A round object that is meant to have something wrapped around it
Plexiglas: A strong clear plastic that can be used instead of glass
Bland: Not interesting
Form: The shape and structure of something
Dome: A large rounded roof or ceiling shaped like half of a sphere
Sofa: A long upholstered seat usually with arms and a back and often convertible into a bed
Décor: The style or decorations of a room
Switch: A device for making, breaking, or changing the connections in an electrical circuit
Gravity: A force of attraction between particles or bodies that occurs because of their mass

Purpose	Children think about design in a creative and imaginative way. The text provides phonemic awareness with a rhyming words and alliteration. This book also introduces the idea of drawing plans before starting to build or design something.		
Read the Story	Jack decides to build a new house, but it is no ordinary house. He plans a dream house full of fun, futuristic themed rooms.		
Cover	Read the title, **If I Built a House**. Tell children that the book is written and illustrated by Chris Van Dusen.		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
Inside cover/ back cover		Show inside of back cover and explain what a blue print is.	Ask them to look for repeating letter sounds or rhyming words.
1-2	Ask the children what they think Jack is thinking about. **Bland** means uninteresting.	What do you think Jack is drawing? Why do you think boxy means? Listen to children responses Then restate correct response adding "Yes, it is square like a box." If no one answers correctly answer those were some good ideas but boxy means square like a box and bland means not exciting.	Emphasis the B sounds as you read boxy, boring and basically bland. You can use the term alliteration to talk about boxy, boring, basically and bland.

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3-4	**Norm** means is another way of saying average or regular. **Flow** is how something moves. **Function** is how it used. **Form** is how it is designed. Ask the children if they have used those types of building toys before.	Ask the children to point out all the mechanical or robotic items in this room.	Emphasis the F sounds as you read.
5-6	What room did he redo?	If you were to create a kitchen what ideas do you have for the flow, form, or functions?	
7-8	What is in your living room?		What would you add to the flow, form, or function of your living room?
8-9	How would you describe his new shower?	Ask the children to point out all mechanism that make it a machine?	Is your shower in a machine or do you use soap as a tool to scrub you clean?
10-11			
12-13	**Décor** means: The style or decorations of a room. Do you think slides might be a nice décor inside your homes.	Would you like a slide instead of stairs?	Tell us about the décor in your home?
14-15	Listen to that create/great and cool/spool those are rhyming words		Have them point out words that sound the same.
16-17	**Gravity** is a force that attracts and pulls us down to the earth	Talk about the idea of a room to fly? What ideas do children have for an entertain room in their own homes.	Did you hear any rhymes? Tall/wall, ground/around, air rare
18-19	Listen and see if you hear some words that rhyme? Around/sound Zoom/room		
19-20	Would you be scared to swim with all those fish?		
20-21		Where do you think jack is flying?	Have them point out words that sound the same.
22-23	**Hatches**- an opening allowing something to go through it	**Plexiglass** – a see through material that looks like glass but is made of plastic	
24-25	**Daringly** means to take a risk	**Exquisitely**- elegant or over the top very well done.	What do you think that means when the author writes? "Daringly bold yet exquisitely fine-"

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Discussion Questions:	What your favorite room that Jack Designed? Can you think about a room you would like to design? Now turn and talk to a friend to share your idea with them.	Ask children if you were to design a special room, what kinds of things would you put in it?	Can you think of two rhyming words you heard in the story? Can you think of two rhyming words to describe the room you drew in our class book?

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Dig, Dig, Digging
Author: Margaret Mayo
Illustrator: Alex Ayliffe

Suggested Vocabulary:
Dig: To break up and move earth
Swooshing: The sound of a rush of water from the hose
Squelch: The sound of walking through mud
Transporting: To move things using a vehicle (a car, truck or boat)
Rumbling: A deep noise
Tumbling: To fall down
Whirring: A sound made by the helicopter wings buzzing around
Tar: The stuff roads are covered with
Caterpillar Treads: The special tracks on a bulldozer wheels on bulldozers

Purpose	The book introduces vocabulary related to vehicles used in building		
Read the Story	The book will build vocabulary for action words.		
Cover	Read the title, **Dig Dig Digging**. Tell children that the book is written by Margaret Mayo. Tell the children that the book is illustrated by Alex Ayliffe.		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
	Before reading show the cover of the book and read the title, author and illustrator while pointing to the words as you read.	During the second read. Ask children if they have seen the vehicle and what was it doing when they saw it?	Before reading, ask children to recall some vehicles from the story and make a list. Ask children to help you read by acting out the different vehicles motions. Assign each child a vehicle to act out as you read.
1	**Digging** is when you break up and move the earth. As you read, use hand motions: Arm down in digging movement as you read lifting move arm and tipping move hand out.	As you read look at the picture and say, I wonder what he is digging? When children answer ask how they know?	Read the page and allow a moment for children to act out the motions.
2	When you read "flashing" use hand movements; when you read **swoosh** use hand gesture.	Ask is they have ever heard anything swoosh?	Read the page and allow a moment for children to act out the motions.
3	As you read "pull", use one hand in pulling motion, as you read "squelch" make a squishy fist motion.		Read the page and allow a moment for children to act out the motions.

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4	As you read "gobbling" use hand to make sign; also make gestures for eating, squeezing and squishing.		Read the page and allow a moment for children to act out the motions.
5	Use hand motions for "lifting" and "Down comes the pipes."	Ask, "Have you ever seen a crane?"	Read the page and allow a moment for children to act out the motions.
6	**Transporters** move things using vehicles. Use hand motion for "ramps down, ramps up"	Say, " This transporter moves cars, how many cars?" point to the cars as you count aloud.	Read the page and allow a moment for children to act out the motions.
7	Use hand motions to emphasize the words		Read the page and allow a moment for children to act out the motions.
8	**Whirring** is the sound made by helicopter blades. Point to the helicopter blades as you read the word.		Read the page and allow a moment for children to act out the motions.
9	Point to the rollers and move hand in rolling motion. **Tar** is the stuff that roads are covered with.		Read the page and allow a moment for children to act out the motions.
10	Use hand motions as you read "push" Point to the bulldozer treads as you define caterpillar treads. **Caterpillar treads** are special tracks on bulldozers.	Point to the treads on the bulldozer and say, "Those are different types of wheels, how do you think they work?"	
11	Move hands in a long motion. Point to the long one and tall one as you read.		
12			
Discussion Questions	What was your favorite machine?	After the story ask children what the trucks did all day and what they will do all night.	Ask children what they do all day and what are some things they do at night? Make a class chart to compare answers.

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My Dream Playground
Author: Kate M. Becker
Illustrator: Jed Henry

Suggested Vocabulary:
Playground: An outdoor space for children to play on
Neighborhood: An area where a group of people live near each other
Project Manager: A person in charge of workers at a construction site
Sketchpad: Pad or book where you can draw
Stoop: A small staircase or platform leading into apartments or other buildings
Twisty: Lots of turns like on a slide
Fridge: Is a way to abbreviate or shorten the word refrigerator

Purpose	This text will demonstrate the process of designing and building a little girl's dream playground. After reading this story, the children will be encouraged to plan, design, and explain a structure or building that they dream about.		
Read the Story	A little girl has a dream that the empty lot across the street from her apartment will become a playground someday. She dreams of all the possibilities that could be on her dream playground and draws many designs to demonstrate what her dream playground will look like. One day, a man comes along who, in fact, is going to build a playground in that empty lot. The little girl shares her drawings of her dream playground to the man and her dream finally comes true!		
Cover	Read the title, **My Dream Playground**. Tell children that the book is written by Kate M. Becker. Tell the children that the book is illustrated by Jed Henry.		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
1-2	A **neighborhood** is an area where people live near each other.	Ask children to tell you about the playgrounds they visit. Ask them the name of the playground. Extend asking follow up questions such as: "What equipment do you have at your playground?" "Who do you play with when you are there?"	Say "While I read, think about what you would add to a playground."
3-4	A **sketchpad** is a pad of paper where you can draw. A **Stoop is** a small staircase or platform leading into apartments or other building.		
5-6	Read the text then state she drew many things in her sketchpad. It looks like she had a lot of ideas.	Talk to the students about nouns, "the slide," vs. verbs, "she is sliding."	Have children turn and talk to a friend about what type of equipment they would add to their favorite playground.
7-8	**Twisty** – means the slide made lots of turns		

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9-10	Compare the children's drawing to the blueprints or plans used in the book <u>If you Built a House</u>.	Why do you think her mom said never stop dreaming?	We all dreamed about a room we would design if we built a house. I wonder what ideas we could come up with if we built a playground like the girl in this story.
11-12	**Fridge**- is a way to abbreviate or shorten the word refrigerator.	Why do you think the girl is getting her drawings?	
13-14	Sir- is another name for a man Volunteers are people that help other by giving of their time. Designs- are the drawings of the playground. Architect- a person who designs Project manager-responsible for planning, doing and completing construction from an idea to structure.	What do you think Darell means when he says, "This is an impressive playground design!" Impressive means something is grand very awesome.	Ask children if they or their family members has ever volunteered
15-16	An opinion is what you think about something.	Why did Darell ask for her opinion on the design?	Talk about the difference between real and dream.
17-18	After reading state it looks like there were volunteers from the market, hardware store and neighborhood.	Ask the children what types of tools and materials they think are needed to build a playground?	Ask "Why did it take so many different people to build a playground?"
19-20	Interviews are when people are asked questions.	What do you think the girl might have told the news reporter?	If you were going to interview the girl about the building of the playground what would you want to ask her?
21-22	How do you think the girl is feeling being able to play on her dream playground?		
Discussion Questions	What would you want in your dream playground?	What would your dream playground look like?	How would you plan your dream playground?

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The House in The Meadow
Author: Shutta Crum Illustrator:
Paige Billin-Frye

Suggested Vocabulary:
Meadow: A piece of grassy land
Mason: A builder that works with stone
Form: A mold for the concrete
Apprentices: Someone who is learning a skill

Purpose	This text is a rhyming story to help children to hear and generate rhymes.		
Read the Story	This story shows the building process from start to finish and introduces the names of workers.		
Cover	Read the title, **The House in the Meadow**. Tell children that the book is written by Shutta Crum. Tell the children that the book is illustrated by Paige Billin-Frye.		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
	For the first read of this book slowly read through the book pausing after you read each page to look at the illustrations.	Before reading, show the book and ask if children can recall what the story was about.	Remind the children that the story had rhymes in it with each number. Ask children to help read the story by filling in the missing rhyming word.
1	A meadow is a piece of grassy land.		
2-3		As you read, emphasize "10" and "again," say "That kind of sounds like a rhyme, what do you think?"	Read the words and stop before "again" to allow children to complete the rhyme.
4-5		As you read, emphasize "fine" and "nine" then ask the children if they heard any words that sound alike.	Read the words and stop before "nine" to allow children to complete the rhyme.
6-7		As you read emphasize the rhyming words "nine" and "fine."	Read the words and stop before "fine" to allow children to complete the rhyme.
8-9	A **Mason** is a builder that works with stone. **Form** is a mold for the concrete.	As you read, emphasize the rhyming words "straight "and "eight."	Read the words and stop before "eight" and "straight" to allow children to complete the rhyme.
10-11		As you read, emphasize the rhyming words, "Kevin" and "seven."	Read the words and stop before "Kevin" to allow children to complete the rhyme.
12-13		As you read emphasize the rhyming words, "Kevin" and "seven."	Read the words and stop before "Kevin" to allow children to complete the rhyme.

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14-15		As you read emphasize the rhyming words, "sticks" & "six."	Read the words and stop before "six" and again before "sticks" to allow children to complete the rhyme.
16-17		As you read emphasize the rhyming words, drive and 5.	Read the words and stop before 5 and again before drive to allow children to complete the rhyme.
18-19	While reading define apprentices	As you read emphasize the rhyming words "floor" and "four."	Read the words and stop before "four" and again before "floor" to allow children to complete the rhyme.
20-21		As you read, emphasize the rhyming words "carefully" and "three."	Read the words and stop before "three" and again before "carefully" to allow children to complete the rhyme.
22-23		As you read emphasize the rhyming words "do" and "two."	Read the words and stop before "two" and again before "do" to allow children to complete the rhyme.
24-25		As you read. emphasize the rhyming words "done" and "one."	Read the words and stop before "one" and again before "done" to allow children to complete the rhyme.
26-27	Say "What is that?" while pointing to the moving truck. Then say, "It says Olive's Meadowlands moving company right here" as you point to the words.		
28-29		As you read. emphasize the rhyming words "son" and "one."	Read the words and stop before "one" to allow children to complete the rhyme.
30			
Discussion Questions	After the story comment, "There were a lot of workers that helped to build the house; do you remember any of them?"	After the story say, "There were lots of rhymes in the book do you remember some of them?" (Generate a list and make a chart)	Review the chart from the previous read. Ask students to generate their own rhymes.

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The Three Little Pigs
Author: Patricia Seibert
Illustrator: Horacio Elena

Suggested Vocabulary:
Curious - Eager to know and learn
Straw - Dried glass or grains
Satisfaction – To like and feel good about what you did
Lashed – Tied together
Frame - The structure that support or holds up the walls and roof of homes
Brow - Area around your eyebrows and forehead
Tracks - Footprints in the dirt
Shone - Another word for shine
Grinning - Smiling with an open mouth
Sturdy - Strong and solid

Purpose	To discuss the selection of building materials. Discuss how various materials used in construction are more sturdy or durable than others. Build background knowledge of a traditional fairy tale to make comparison among other versions of the same story.		
Read the Story	The Three Little Pigs- traditional rendition of the story.		
Cover	Read the title, **The Three Little Pigs**. Tell children that the book is written by Patricia Sibert. Tell the children that the book is illustrated by Horacio Elena. Show cover –ask children if anyone know what the story might be about? Ask all children to raise hands if they have read stories about the three little pigs before?		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
1-2	Read the text then define **curious** - eager to know and learn.		
3-4		Summarize before turning page. The first pig's idea to build was to build a house as fast as he can?	
5-6	**Straw** is like dried glass or grains. Sometime people use straw to make baskets or weave hats.		
7-8	**Satisfaction** means to like what you did and feel good about it. You are satisfied with what you did.	It said that the 1st pig did not spend much time planning or thinking about his idea for constructing his home. Do you think it is going to be strong enough? Why/Why not?	
9-10	**Lashed** - means to tie together. **Frame** - is the structure that support or holds up the walls and roof of homes.	Do you think the second pig put more effort into his idea and plan? Why?	

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11-12	Define **brow** – the area around your eyebrows and forehead.	What do you think is the strongest materials used to construct a home (straw, sticks, or bricks) and why?	What would you make your house out of? Why?
13-14	**Sturdy**- strong and solid.		
15-16	**Tracks**-foot prints in the dirt.		
17-18	**Shone** is another word for shine. **Grinning**- smiling with an open mouth.		Encourage children to chime in "Not by the hair on my chinny, chin, chin!"
19-20		What do you think the wolf is going to say?	Have children read with you. "Then, I huff and I puff, and I blow your house in."
21-22			Have group chime in.
23-24			Have group chime in.
25-26	What is this house made of?	Ask children before reading page, "Do they think the brick house is stronger than the straw and stick house? Why do they think so?	
27-28	**Exhausted** is another word for tired. He was physical tired from all that huffing and puffing.	What do you think it means the wolf slumped, exhausted outside the brick house?	
29-30		Read page 29. Then ask the two or three students to tell you what they think the wolf's plan is?	
31		After reading page, ask "Why do you think the third pig's plan to design a house was sturdier than the others?" Link the responses to selecting materials for their own design and construction efforts.	
Discussion Questions	Which pig had the strongest house? How do you know?	How can we make our houses the strongest? What materials will you use in building your own house?	Have you heard or seen any other stories like this?

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The Most Magnificent Thing

Author and Illustrator: Ashley Spires

Suggested Vocabulary:

Magnificent: Something that is very good

Supplies: Things you need to complete a task or idea

Pounce: A sudden movement (Often cats do this as they try to catch things like mice)

Wrenches: The name of a tool, but it also used to describe how someone might twist, pull, or move something

Adjust: To move something to make it fit

Pummel: To hit something over and over with your hand

Explodes: Get very angry or frustrated

Stroll: A leisurely way to walk

Fades: Means the day turned into evening

Purpose	This text is valuable to help children persevere and not give up.		
Read the Story			
Cover	Read the title, **The Most Magnificent Thing**. Tell children that the book is written and illustrated by Ashley Spires.		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
1-2	**Magnificent** means something is very good.		
3-4	**Hires**- means you want someone to work with you on something for a job		"Easy" and "Peasy" rhyme.
5-6	**Supplies**- are what you need complete a task or idea. Supplies could be ingredients used in a recipe or materials used to create something.		
7-8	**Pounce**- is a sudden movement. Cats often do this as they try to catch thing like mice.	What do you think the phrase means "the girl tinkers and hammers and measures"?	Have you ever admired your own work? How did it make you feel?
9-10	**Wrenches** might remind you of the name of a tool, but it also is used to describe how someone might twist, pull, or move something. The word "fiddle" makes me think this about movement.	How do you think she feels when it is still wrong?	What do think it means to "circle"?
11-12	**Adjust**- means to move something to make it fit or to result in what you want to happen.	Have you ever had to examine a situation, plan, or idea to see why or why not it is not working?	Have you ever had to study something to think about how to make your idea or plan work?

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13-14	She makes it square. She makes it round. Can you draw a square and round shape in the air?		It looks like she tried a lot of different things but none of them worked - how do you think she felt?
15-16		What do you think it means: "They can't see the MAGNIFICENT thing that she has in her mind?"	Why was the girl mad? Have you ever felt like that?
17-18	**Pummels** means to hit or strike something over and over with your hand.	When she says, "If only the thing would just work." How do you think she is feeling?	
19-20	**Explodes** is a word use to describe her frustration. She did not explode, but her emotions did.	What do you think the author means when he writes, "It is not her finest moment?"	Have you ever been so frustrated or mad that you could not control how you were feeling? What did you do?
21-22	Have you ever wanted to quit?	How do you think a walk will help her?	
23-24			
25-26	**Stroll** is a leisurely way to walk.	What does it mean - "Some parts of the wrong thing are really quite right?"	
27-28	The afternoon **fades**- means the day turned into evening.	What do you think the girl was thinking about as she walked by all of the parts?	
29	What do you think the girl made?	Why are they no longer disappointed?	Have you ever been disappointed in yourself?
Discussion Questions:		Why are they no longer disappointed? What made them overcome their disappointed? Use pictures to talk about emotions and overcoming feelings such as: Mad, Frustrated, Disappointed	Have you ever been disappointed? How have you overcome being disappointed?

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The Three Little Pigs and the Somewhat Bad Wolf
Author & Illustrator: Mark Teague

Suggested Vocabulary:
Paid: Getting money for your work
Reluctantly: Not really wanting to do something
Cheap: Low cost
Free: Does not cost anything
Mortar: A powder material mixed with water to join materials together
Enormous: Very big
Reeked: A stinky smell
Exhausted: Very tired
Revived: Another word for restored or brought back.
Embarrassed: Uncomfortable and/or confused

Purpose	Talk about planning and choosing materials for building. To compare and contract versions of the same story. To encourage children to generate their own ideas for retelling their own version a fairy tale.		
Read the Story	This book is a different version of the story of the three pigs. There are many differences from the traditional retelling. For example, the pigs are paid and therefore making choices about how to spend money as well as how to build, and how to befriend the wolf. Before you read the story- focus children attention on listening to the story to see what is similar and different about this book and the story of the Three Little pigs read the previous day.		
Cover	Read the title, **The Three Little Pigs and the Somewhat Bad Wolf**. Tell children that the book is written by and illustrated by Mark Teague.		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
1-2	Define: **paid** is when you receive money for your work.		
3-4		Do you think one of the pigs is planning more for building than the others? What makes you think that?	
5-6	**Reluctantly**- Not really wanting to do something. **Cheap**- low cost		
7-8	**Free**: Does not cost anything or very little		
9-10	**Mortar**- a powder materials mixed with water to join materials together.	What does the mortar remind you of? It's kind of like frosting on a cake. The frosting holds the cake together and the mortar holds the building together.	
11-12	Point to the **hammock** – a hanging bed or couch		
13-14			

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15-16		Do you think it took a long time for the third pig to build the brick house? What makes you think that?	
17-18	What do you see in the garden?	The third pig seems to be eating healthier food. What are some healthy foods that you eat?	
19-20		Have you ever been in a bad mood when you hungry?	
21-22			
23-24		Turn and talk to a friend about what is different about this version of the three little pigs story.	
25-26	**Enormous** - means very big.		
27-28			
29-30	**Reeked** - a strong unpleasant smell		Read text and encourage children to chime in of "huff"
31-32	Read text then define **exhausted** very tired, fatigued, or worn out.		
33-34	**Revived**- is another word for restored or bring back. **Embarrassed**- uncomfortable and/or confused		
35-36			
37			
	Similarities:	Started once upon a time means set out on their own. Straw, sticks and bricks Third pig spent more time planning and building than the other pigs. Blew down straw and stick house but not brick house Huffing and puffing and blowing	
	Differences:	Lived with parent/lived with farmer Pig had money for potato chips and soda and building materials. Big bad wolf/somewhat bad wolf Pig rode rather than ran to other pigs' homes Brick house huff-huff Pigs gave food to wolf Pigs and wolf are friends	

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A House in the Woods
Author & Illustrator: Inga Moore

Suggested Vocabulary:
Den: A shelter for an animal sometimes made of sticks
Hut: Small homes made of natural materials, usually logs or grass
Brilliant: Showing great intelligence
Team: A group that works/plays together for common purpose, plan, or idea.
Felled: Refers to timber/trees being cut down
Scaffold: A temporary structure to hold workers and materials
Fulcrum: The point of rest on which a lever turns to move something
Fitted: To maneuver something so that it has the same form or shape (such as puzzle pieces)
Pulley: A wheel with grooves to pull or raise items that are heavy by changing the direction of the force
Lodge: A place where beavers live, usually made out of sticks and mud
Cheeps: A chirp or peep sound made by birds

Purpose	Compare the story A House in the Wood to other stories recently read. Discuss how the animals, plan, construct, and add finishing touches to their structure. Explore the simple machines used in the building process.		
Read the Story			
Cover	Read the title, **A House in the Woods**. Tell children that the book is written and illustrated by Inga Moore.		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
1-2	Read text. **Den**- a shelter for an animal usually made of sticks **Hut**- a small home made of natural materials usually logs or grass.	During second read, prior to reading the book, ask children to think about similarities and differences between this story and the two books read about the three little pigs.	Children could choose to act out this book, or one of the other versions of the Three little pigs.
3-4			
5-6	Do you think the pig can live in den now?		
7-8	Read text: Then ask "What do you think might happen next?" Reinforce children's ideas and tell them they have great ideas, tell them that now you going to find out what this author's ideas might be.		

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9-10	Brilliant idea – one that shows great intelligence and well planned to produce positive outcomes.	Ask the children to turn and talk to identify the main characters in this story.	
11-12	Chimney stacks- the part of fire place that comes out above the roof	Why do you think the pigs, bear and the moose called the beavers?	
13-14	**Team**-a group that works/plays together common purpose, plan, or idea.	Ask children explain why a team might be better when constructing a home rather than working alone.	Can you tell us about a time you wanted to work in a team rather than working alone?
15-16	So they **felled** the timber… Lumbers use the word **felled** when referring timber or trees being cut down.		
17-18		Show the page spread and encourage children to talk about the tools and machines used by the animals: wheelbarrow, ax, saw, bucket, cement-mortar, hammer, chisel	It seems like you could write a whole book about all the tools used to construct a home. What tools would you use?
19-20	Look at opposite page - point out the **scaffolding.** Then define it as a temporary structure to hold workers and materials.	Read text and talk about how the walls are being pulled upward using a leverage created by lever. Point out the Y on the stick and label it as a fulcrum.	
21-22	**Fitted**-to make something so that it has the same form or shape-like puzzle pieces.	Point the picture on opposite page show the **pulley**- Talk about how it is used to lift a heavy load with little force.	Talk about how wheels on the cart and cement mixer-make it easier to move things because it creates less **friction**. Friction is the rubbing of surfaces. When surfaces are rough, motion is slowed. When surfaces are smooth, it is easier to slide or roll materials on.
23-24	It says they are going to the junkyard to get furniture. What are some furnishing you think they might get for their new home?	If you had a new home how would you furnish it? This sounds like the great idea for a book.	

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25-26	**Bill**-a written piece of paper that tells how much you owe. Parents may get bills in the mail or at restaurants.		
27-28			
29-30	**Lodge**-a place where beavers live, usually made out of sticks and mud.		
31-32			
33-34			
35-36			
37-38	**Cheeps**-are chirps or peep sounds made by birds.		
39			
		Encourage children to think about writing their own stories involving animals that build homes in the woods.	
Discussion Questions	Was the hard work worth the effort?	What is a time that you worked hard?	What does your house look like? What would you change if you could?

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Construction Zone
Author: Tana Hoban
Illustrator: Tana Hoban

Suggested Vocabulary:
Tamper: A machine that packs down a small area of dirt
Cherry picker: A vehicle that has a bucket to lift a person
Clamshell bucket: A type of scoop on a big machine

Purpose	This book will introduce the children to the various construction vehicles.		
Read the Story	The book introduces a variety of construction vehicles in action.		
Cover	Read the title, **Construction Zone**. Tell children that the book is written by Tana Hoban. Tell the children that the book includes photos that Tana Hoban took.		
Page Number	**1St Reading**	**2nd Reading**	**3rd and 4th Reading**
1-2	After reading, point to the picture, specifically the stabilizer legs. Explain that this part of the truck is called the stabilizer leg. They are used to keep the truck supported while using the digging bucket.	Show the picture and wonder aloud, "There is a bucket on both sides of this truck I wonder why?" Allow for children to think/answer aloud.	
3-4		Point to the treads and ask if anyone remembers the special name of the wheels from the book we read before.	Point to the plow and say, "That looks sturdy. I wonder why it would need to be so strong?"
5-6		Point to the picture on page 6. Say, "They are pouring the concrete into forms; does anyone remember the name of these workers (from previous books)?"	Have you ever seen a concrete truck? Did you ever notice that the barrel part is always moving, why do you think that is?
7-8		Wow that dump truck goes high. I wonder how it is able to go that high. Point to the hydraulic arm and wonder aloud, "What do you think that is for?"	
9-10	Ask children, "What are cranes used for?"	After reading the name of the truck, recall from a previous story, "This is a type of crane. We saw a crane in another book, but it looked different. Do you remember what that crane was for?"	Have students use their arms to show how a crane works.

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11-12	A **Tamper** is a machine that packs down a small area of dirt.		Show picture again, define the word and ask if the tool reminds them of any other tools? If they need help say it reminds me of a jackhammer, do you know what a jackhammer is for?
12-13	A **Cherry picker** is a vehicle that has a bucket to lift a person.	Read the name of the truck and say, "That's a weird name, I wonder where it came from."	Ask children if they have seen a cherry picker before, and where - what were the workers doing?
14-15		Say, "Look - another crane, this one is doing a different job than the other crane we saw in this book."	
16-17		Read the name of the vehicle and wonder aloud, "Crawler backhoe… I wonder why it is named that."	Point to the treads and ask if they can remember what they are called, and which other vehicle had the same ones.
18-19		Point to the pictures and explain that a paver dumps the gravel then smooths it out, using the roller.	
20-21		Show the roller and ask, "Why is it so big?"	
22-23			
24-25	Read through the pages pointing to the pictures.		
Discussion Questions	What was your favorite part of the book?	Ask, "Which is your favorite vehicle, Why?"	Review the vehicles, "Some move stuff. Some smooth things. Let's try to sort them out. How should we do it?" Chart the responses.

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The Night Worker
Author: Kate Banks
Illustrator: Georg Hallensleben

Suggested vocabulary:
Engineer: A person who designs, builds, or maintains engines or machines
Hallowing: Taking the earth out
Survey: Boundaries of the site
Foreman: The boss at the construction site
Excavator: Machines that move earth
Foundation: The basement or slab that a building is constructed on
Hoist: Lift heavy things
Mammoth: Very huge
Halt: Another word for stop

Purpose	Discuss and explore the use of machinery, non-traditional work experiences, and family relationships.		
Read the story	A boy goes to work with his father at night. His father works at a construction site. He learns more about his father's job and others that work at night. Key events: father takes son to work, son drives the bulldozer, and father and son go home to sleep during the day as other rise for another day.		
Cover	Read the title, **The Night Worker**. Tell children that the book is written by Kate Banks. Tell the children that the book is illustrated by Georg Hallensleben.		
Cover	Show the cover of the book and ask, "What do you think this story is about?" Then read cover.	Look at the cover with children and ask, "Why are they working at night?"	Bring some construction toys to circle and ask what they are used for. Encourage children to retell the story with you.
Pages	**1st reading**	**2nd reading**	**3rd and 4th reading**
1-2	The text said, "Alex's dad is an engineer?" Any ideas of what an engineer does? Let's read on to find out more about what kind of engineer Alex's dad is.		Have you ever wanted to go to work with a family member?
3-4		Why do you think Papa is giving Alex a hard hat?	
5-6		Ask children, "Who do you know that works at night?"	
7-8	Hallowing: taking the earth out.	Why do you think they might take dirt out of the ground at a construction site?	Have you ever seen a building going up? After children relate to their own lives, restate what they say and if possible use the words, "design, construct, or build," as you restate what they tell you.

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9-10	Survey: boundaries of the site. Alex is looking at the entire site.	Ask, "Why do you think his father needed a flashlight?"	
11-12	Foreman- the boss at the construction site.	Ask the group, "Do you ever make plans for project?"	What do you think it means clouds rise from the dust? Point to picture showing dust being pushed into the air by the bulldozer. Encourage children to give examples of clouds of dust they have created or seen in the past.
13-14	Excavator: machine that moves earth. Point to the backhoe/steam shovel.	Have you ever seen a backhoe or steam shovel dig into the earth?	How might the excavator sound as it groans of the bed of the job site? The bed of the site is where the building will be built.
15-16	**Foundation:** The basement or slab that a building is constructed on.	The foundation is getting poured on to the bed of the job site. The word "bed" can also be used to identify the location of where things are placed. Example: A bed of flowers, or a riverbed, or the place where the building being constructed is to be placed.	Have you ever been in a basement or seen a foundation of a house?
17-18	**Hoist** is another word used to describe lifting heavy items. **Mammoth** is another word for very large.	After reading page, point to the big crane and show the mammoth load being hoisted up.	Ask students to act this out.
19-20		How do you think Alex feels about getting into the cab of the bulldozer?	Have you ever ridden or been in a big machine?
21-22	Point to the levers in the picture after you read the text.		How do you think Alex felt as he pushed the levers? What adults' jobs have you tried?
23-24	**Halt** is another word for stop.	Do you think Alex was proud that he was able to some work?	Have you ever had to take a break?
25-26	**Survey** means that he looked around the job site.	What do you think the author means when he says, "All motion is stopped like a held breath?"	
27-28		Why do you think Alex is so tired?	How would you feel if you did all of that work?
29-30			

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31-32		Why do you think Alex is sleeping as morning comes?	
33-34		Who else works at night and why?	
Discussion questions	Alex's dad is an engineer, but does he build? Why do you think he works at night?	Do you know anyone that works at night?	Talk about jobs that people have at nighttime and what things they can fix more easily at night (roadways, bridges, schools, stores, etc.) Who else works at night and why?

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Resources

Name of activity: Cubes, Cones, Cylinders, and Spheres Lesson Plan	Week 1
Estimated time: 30 minutes	
Link to Gold objectives: Objective 18: Comprehends and responds to books and other texts Objective 21: Explores and describes spatial relationships and shapes	
Essential Questions: • What is a 2-D shape? • What is a 3-D shape? • What is the difference between a 2-D and a 3-D shape? • What are the names of 2-D shapes? • What are examples of 2-D shapes around us? • What is a plane? • What shapes in our classroom could you trace on paper to make a 2-D shape? • What are the names of 3-D shapes? • What are examples of 3-D shapes around us? • What are examples of 3-D shapes in our classroom that you could use to build something? • What are the names of 2-D and 3-D shapes that we see in buildings, signs, vehicles, etc. that we see in our community every day?	
What children will know or do: *(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)* The children will correctly name and identify 2-D shapes. The children will correctly name and identify 3D shapes. The children will correctly sort 2-D and 3-D objects. The children will use objects and materials to create 2-D and 3-D designs and constructions.	
Content specific learning objective(s): Objective 21: Explores and describes spatial relationships and shapes Objective 26: Demonstrates knowledge of the physical properties of objects and materials	
Language objective(s): Teaching Gold Objectives: Objective 8: Listens to and understands increasingly complex language Objective 10: Uses appropriate conversational and other communication skills Objective 18: Comprehends and responds to books and other texts	

Procedure:

- The teacher will introduce and read the book, Cubes, Cones, Cylinders, & Spheres by Tana Hoban. Because there are no words in this book, the teacher will engage and encourage the children to interact and engage in conversations about the different objects they notice in the pictures and identify their shapes.
- The teacher will explain the definition of flat shapes (2-D shapes) vs. 3-D shapes.
- She will ask the children to provide other examples of things they notice in the classroom or in the community that are 2-D or 3-D shapes as they move through the book.
- After reading the story, the children will break up into small groups.
- In one small group, the children will sort, identify, and graph pictures of 2-D and 3-D shapes on a chart. They will count how many pictures of 2-D and 3-D shapes they found. Which group has more? Less?
- In another small group, the children will find and name objects in the classroom that they can trace on a plane or paper to create a 2-D design.
- In another small group, children will name and use objects and materials such as wooden blocks to create a 3-D design.
- Children will rotate among these three small groups until they all have had the opportunity to engage in each small group activity.

Materials needed and/or additional resources:
Book: Cubes, Cones, Cylinders, & Spheres by Tana Hoban Graph: 2-D and 3-D pictures
Glue, Paper, Pencils or Markers
Examples of objects to trace on paper to create 2-D designs
Examples of 3-D objects and materials to build 3-D designs

Name of activity: Changes, Changes by Pat Hutchins	Week 2
Estimated time: 30 minutes	
Link to Gold objectives: Objective 16: Demonstrates knowledge of the alphabet Objective 17: Demonstrates knowledge of print and its uses Objective 18: Comprehends and responds to books and other texts Objective 24: Uses scientific inquiry skills Objective 26: Demonstrates knowledge of the physical properties of objects and materials Objective 28: Uses tools and other technology to perform tasks	
Essential Questions: • What shapes do you notice in these pictures? • Can you think of anything in this classroom that reminds you of the objects and materials in this book? What are those items? • Why do you think some of the buildings fell down or were ruined? Were heavy blocks placed on top of lighter blocks? How do you think you could rebuild some of the structures in this book to make them stand longer? • What could you build with the wooden blocks in our classroom? If your building was ruined, what could you do to rebuild and change it?	
What children will know or do: *(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)* The children will be able to identify 2-D and 3-D shapes The children will be able to use the same materials to rebuild a structure, but making it different than before. The children will be able to use problem solving to discover why some structures stand and others fall. The children will try several different solutions to build structures identifying shapes correctly, and using positional words correctly.	
Content specific learning objective(s): Literacy Science & Technology Mathematics	
Language objective(s): Objective 16: Demonstrates knowledge of the alphabet Objective 17: Demonstrates knowledge of print and its uses Objective 18: Comprehends and responds to books and other texts	

Procedure:

- The teacher will introduce and read the book, Changes, Changes by Pat Hutchins during large group time.
- The teacher will encourage all children to participate in a discussion about what they notice in the pictures, identify the shapes and materials that the people in the story are building with.
- After reading the entire story and discussing the pictures, the teacher will ask the question, "What type of structure do you think you could make with similar shapes in our classroom to the ones in this story? If your structure was ruined, what could you do to change it?"
- After answering these questions, the children will move into small groups. Each child will choose a partner to work with, to build a structure out of wooden blocks. They will talk about their ideas, problems, and solutions with their partner.
- Each pair of children will use the wooden blocks shapes to create a structure together. Each child will draw a "blueprint" of their structure and will also take a photograph of the structure they built.
- After taking a photo of their structure, the children will knock it down and talk with their partner about how they will use the same materials to reconstruct their building into something different. They will repeat the blueprint and photograph steps.
- The children will make comparisons about similarities and differences in their structures, as well as the structures built by other children.
- Each child will write the name of their structure on their blueprint that they draw.
- The teacher will record the similarities and differences noticed by her students during a large group.

Materials needed and/or additional resources:

Book: Changes, Changes by Pat Hutchins Markers, Paper,
Pencils
Wood blocks Camera
Chart Paper

Name of activity: "If We Built a House" Class Book	Week 2
Estimated time: 10-15 minutes	
Link to TSGold objectives: 7. Demonstrates fine-motor strength and coordination 11. Demonstrates positive approaches to learning 14. Uses symbols and images to represent something 17. Demonstrates knowledge of print and its uses 26. Demonstrates knowledge of the physical properties of objects and materials 30. Shows basic understanding of people and how they live 33. Explores the visual arts	
Essential Questions: • What is a blueprint? • Who uses blueprints? • How does this planning help you grow an idea? • What are the steps in the design process?	
What children will know or do: *(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)* • Understand what a blueprint is. • Utilize blueprints to design and test their own ideas. • Collaboratively create a class story using the design process to build a house. • Individually create a blueprint for a room in the house. • Explain the steps used to grow their ideas enough to share their idea with others. • Draw pictures by combining shapes and symbols to represent their ideas. • Use their knowledge of print and letter sounds to add text to their designs using labels or sentences.	
Language objective(s): Preschool Learning Experiences Learning Guidelines: 7. Develop familiarity with the forms of alphabet letters, awareness of print and letter forms. 16. Use their own words or illustrations to describe their experiences, tell imaginative stories, or communicate information about a topic of interest. 17. Add details or make changes to a published or class made story. 18. Use emergent writing skills to make letters in many settings and for many purposes.	

Procedure:

- After reading *If I Built a House* by Chris Van Dusen, talk with the whole group about writing a class book called "If We Built a House."
- Let the children know that they will each get to plan and design a unique room in our pretend house for our book.
- During small group, show the children the inside back cover of the book that has the blueprints for Jack's house.
- Discuss why blueprints are an important part of the building process. Then invite children to draw a room for our class house.
- Encourage children orally tell other about their plan.
- Then encourage children to label or dictate text explaining their blueprint to others. Compile all the pages to make the class book.
- Read the book in class to the whole group as a read-aloud.

Materials needed and/or additional resources:

- *If I Built a House* by Chris Van Dusen
- Story pages (sample template provided)
- Full sheet of blank paper to draw their blueprint
- Crayons
- Markers
- Pencils

_____’s room in our house has

Name of activity: Construction Dramatic Play (3 options)	Week 2
Estimated time: 10-15 minutes (or however much time allowed during center choice time)	
Link to TSGold objectives: *Social-Emotional:* 3. Participates cooperatively and constructively in group situations. *Physical:* 6. Demonstrates gross-motor manipulative skills 7. Demonstrates fine-motor strength and coordination a. Uses fingers and hands b. Uses writing and drawing tools *Language:* 10. Uses appropriate conversational and other communication skills a. Engages in conversations *Cognitive:* 14. Uses symbols and images to represent something not present a. Thinks symbolically b. Engages in sociodramatic play *Literacy:* 18. Comprehends and responds to books and other texts a. Interacts during read-alouds and book conversations b. Uses emergent reading skills c. Retells stories *Mathematics:* 21. Explores and describes spatial relationships and shapes a. Understands spatial relationships b. Understands shapes c. Compares and measures	
Essential Questions: • Who works on a construction site? • What are the different jobs performed? • What types of machines dig? • What is the best way to build a house?	
What children will know or do: *(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)* • Children will understand who works on a construction site, and what types of jobs they do. • Children will understand about a dig site and what takes place there. • Children will have an understanding of the story of "The 3 Little Pigs," and be able to retell it and act it out. • Children will be able to make predictions and experiment with different materials to find out what building material is the strongest.	

Math Standards: Measurement and Data:
MA.1. Recognize the attributes of length, area, weight and capacity of everyday objects using appropriate vocabulary.
Geometry:
MA.3. Create and represent three-dimensional shapes using various manipulative materials.

Language Objectives:
MA.2. With prompting and support, retell a sequence of events from a story read aloud.
MA.3. With prompting and support, act out characters and events from a story or poem read aloud.

Knowledge of Language
3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
a. Choose words and phrases to convey ideas precisely.*

Vocabulary- names of tools, foreman, contractor, plumber, electrician, plans, idea, saw, sawing, drill, drilling, etc.

Preschool Learning Experiences Guidelines:
Social and Emotional Health
17. Talk about ways to solve or prevent problems and discuss situations that illustrate that actions have consequences.
The Arts
15. Use dramatic play, costumes, and props to pretend to be someone else.
17. Create scenarios, props, and settings for dramatizations and dramatic play.

Option 1: The Big Dig
Procedure:

- Teacher will set up dramatic play area prior to introducing it to the class.
- Teacher will talk about a dig site and machines that dig in large group.
- Children will explore the area in small groups during interest area time.
- Children will pretend to be at a dig site.
- Encourage the children to think creatively about what they are doing and what they are trying to act out.
- Encourage them to use related vocabulary words in their play.

Materials:

- Plastic wading pool
- Tarp (to put pool on)
- Sand
- Hard hats
- Shovels
- Lamented pictures of big machine
- Shovels
- Toy trucks

Option 2: Construction Site Procedure:

- Start by discussing a construction site and the different jobs workers have.
- Invite the children to explore the dramatic play center and the materials.
- Encourage them to take turns being the different workers and acting out their task.
- Ask the children open ended questions while playing to encourage their creative thinking and exploration.

Materials:

- Small table for “site manager”
- Yellow table cloths
- Hard hats
- Plastic tools
- Wooden blocks
- Clip boards
- Paper
- Pencils
- Signs (Danger, hard hat area, tools)

Option 3: The 3 Little Pigs
Procedure:

- Start by reading *The 3 Little Pigs* story.
- Tell the children in large group that we are going to act out the story in dramatic play.
- Explain to children that they are going to be the builders for the 3 Little Pigs, and they have to try and build the pigs' houses using the different materials.
- Have the children make predictions about what they think will work best, and then have them test out their ideas.
- Allow them the opportunity to redesign and mix materials as they choose.

Materials:

- *The 3 Little Pigs* book
- Plastic tools
- Hard hats
- Clip boards
- Paper
- Pencils
- Bucket of pretend straw or small pretend hay bales
- Bucket of sticks (natural or wooden craft sticks)
- Cardboard brick blocks
- Stuffed or toy pigs
- Laminated signs (Pig Building Zone, Danger Pigs Working

Name of activity: Old MacDonald Had a Woodshop	Week2

Estimated time: 15 minutes

Link to TSGold objectives: *Literacy:*
18. Comprehends and responds to books and other texts 18a. Interacts during read aloud and book conversations *Language:*
9a. Uses an expanding expressive vocabulary
9b. Speaks clearly
9c. Uses conventional grammar
9d. Tells about another time or place
10. Uses appropriate conversational and other communication skills 10a. Engages in conversation
10b. Uses social rules of language

Essential Questions:

- How can I tell the difference between a letter and a word?
- Why do people use tools?

What children will know or do:
(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)

- Identify letters in book: E I E I O
- Name tools used in the book: saw, drill, file, paint brush
- Repeat familiar phrases in the book

Content specific learning objective(s): Reading Standards for Literature
MA.8.A. Responds with movement or clapping to a regular beat in poetry or song. Reading Standards: Foundational Skills
MA1. With guidance and support, demonstrate understanding of the organization and basic features of printed and written text: books, words, letters, and the alphabet.

- MA.1.a. Handle books respectfully and appropriately, holding them right-side-up and turning pages one at a time from front to back.
- MA.1.d. Recognize and name some uppercase letters of the alphabet and the lowercase letters in one's own name.

Comprehension and Collaboration:
MA.3. Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
MA.4. Ask and answer questions about the meanings of new words and phrases introduced through books, activities, and play.
MA.4.a. With guidance and support, generate words that are similar in meaning (e.g., happy/glad, angry/mad).
MA.6. Use words and phrases acquired through conversations, listening to books read aloud, activities, and play.

Language objective(s):

- Children will chime in and participate in story telling repeating predictable phrases throughout the read-aloud.
- Children will help read the name of each new tool introduced and say and listen to the initial sound in each word: *saw, drill, file, paint brush*

Procedures:
Show children the end side flaps of the book talk about the various types of saws, hammer, chisels, and drill. Read the first page: "Old MacDonald had a SHOP, E-I-E-I-O." Talk about how you read the word "shop," sweeping finger under word and then letters, pressing under teach letter as you point and say it.

Encourage children to help you read the letters and the words in the story, but especially the letters.
After reading the book revisit the pages. On the page with the saw, talk about how the sheep is sawing; on the page with the screw driver, the cow is tightening a screw. Talk about the sounds made and how these sounds can be made in the pretend workshop as well.

Ask children to generate the names of other tools and make up verses. Example:

- Old Macdonald had a whole punch that went "squeeze/pop."
- Old Macdonald had a lever that went "even and straight."
- Old Macdonald had a ladder that went "up, up, up."
- Old Macdonald had a paint roller that went "round and round."

Talk about Tools: Prior to reading the book, see if children can recall the names of tools brought to circle. Have children do actions as you read book. Point out letters E I E I O and words in text.

Materials needed and/or additional resources:
Old MacDonald Had a Woodshop by Lisa Shulman

Name of activity: Tracing 3-D Shapes to Become 2-D Shapes-Art	Week 2
Estimated time: 30 minutes	
Link to Gold objectives: Objective 18: Comprehends and responds to books and other texts Objective 21: Explores and describes spatial relationships and shapes	
Essential Questions: What is the definition of a 2-D shape? What is the definition of a 3-D shape? What is the difference between a 2-D and a 3-D shape? What are the names of 2-D shapes? What are examples of 2-D shapes around us? What is a plane? What 3-D shapes can we trace on paper to create 2-D shapes?	
What children will know or do: *(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)* The children will correctly name and identify four 3-D shapes (square, triangle, rectangle, circle). The children will correctly name and identify four 3-D shapes (cube, cone, sphere, cylinder). The children will accurately trace 2-D shapes to create a 2-D shape design.	
Content specific learning objective(s): Objective 21: Explores and describes spatial relationships and shapes. Objective 26: Demonstrates knowledge of the physical properties of objects and materials **MA.1**. Identify relative positions of objects in space, and use appropriate language (e.g., *beside, inside, next to, close to, above, below, apart*). MA.2. Identify various two-dimensional shapes using appropriate language. **MA.2.** Use a combination of dictating and drawing to explain information about a topic.	
Language objective(s): **MA.1.** With prompting and support, ask and answer questions about a story or poem read aloud **MA.4.** With prompting and support, ask and answer questions about unfamiliar words in a story or poem read aloud **MA.9.** With prompting and support, make connections between a story or poem and one's own experiences **MA.2.** Use a combination of dictating and drawing to explain information about a topic.	

Procedure: The teacher will send home a newsletter to parents about our construction unit and our group activity about 2-D and 3-D shapes asking them to send in examples of 3-D shapes.
The teacher will introduce and read the book, Cubes, Cones, Cylinders, & Spheres by Tana Hoban.

Because there are no words in this book, the teacher will engage and encourage the children to interact and engage in conversations about the different objects they notice in the pictures and identify the object's shapes.

The teacher will explain the definition of 2-D shapes (flat shapes) vs. 3-D shapes (fat shapes).
The teacher will provide children with the definition of 2-D and 3-D shapes.
Explain, "two dimensional shapes have only two dimensions (length and width)."
Explain that because they only have two dimensions, they are considered "flat shapes."

Three dimensional shapes have three dimensions (length, width and depth).
Explain that 2-D shapes have only one face and 3-D shapes have many faces.
Show the class an example of a cylinder (coffee can), cube (sugar cubes), cone (ice cream cone), and sphere (ball) so children can learn what 3-D shapes look like.

Show the children examples of 2-D shapes such as a square, circle, triangle, and rectangle.
Ask children to provide other examples of things they notice in the classroom or in the community that are 2-D or 3-D shapes as they move through the book.
After reading the story, the children will break up into separate small groups of 3-4 children each. Each group will trace examples of 3-D shapes that were brought in from home to create a 2-D shape design.
Each child will verbally explain which 3-D shapes they used to create their 2-D shapes and will also identify the names of the 3-D and 2-D shapes they used and created during large group discussion correctly.

Materials needed and/or additional resources:

Book: Cubes, Cones, Cylinders, & Spheres by Tana Hoban
Paper, Markers
Examples of 3D objects (e.g., ice cream cone, coffee can, sugar cube, ball, traffic cone, blocks, bubbles, cereal boxes, drums, globe, dice, party hat, gift box, baseball, witch's hat, orange (fruit), pencil, paper towel rolls, etc.

Name of activity: We Can Fix It Class book	Week 2
Estimated time: Fifteen to twenty minutes	
Link to TSGold objectives: 19A: Demonstrates emergent writing skills 19B: Writes to Convey meaning	
Essential Questions: • What are tools used in the building process? • How are tools selected and used safely? • How do people solve problems related to construction, select appropriate tools and, determine how to best move an object? • How are simple machines used in everyday life?	
What children will know or do: *(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)* • Students will understand that people select specific tools for specific tasks. • Students will ask and seek out answers about objects and events with the assistance of interested adults. • Students will link an initial sound to a picture of an object that begins with that sound. • Students will identify the initial sound of spoken words that begin with that initial sound.	
Standards: PK.W.MA.1. Dictate words to express a preference or opinion about a topic. PK.W.MA.2. Use a combination of dictating and drawing to explain information about a topic. PK.SL.MA.4. Describe personal experiences; tell real or imagined stories. PK.SL.MA.5. Create representations of experience or stories and explain them to others.	
Content specific learning objective(s): • Students will identify and explore simple machines such as ramps, gears, pulleys, wheels and levers. • Students will demonstrate and explain safe and proper use of tools and machines.	
Language objective(s): • Students will listen to their own words, or use illustrations to describe their experiences • Students will communicate information about a familiar experience.	
Procedure: • Provide students tools or photos of different tools, people helping, jobs people can do involving fixing things, and people in the act of fixing something. • Prompt students to write about how they help a friend or family member by fixing something; write or draw about something they have fixed, or a picture of themselves using a tool. • Collect individual student work and compile a class book titled, "We Can Fix It!"	
Materials needed and/or additional resources: Photos, drawings or picture symbols of various tools; photos or drawings depicting people engaged in using tools for specific tasks; crayons, markers, pencils, glue sticks and writing paper	

Name of activity: Design Challenge Part 1	Week 2
Estimated time: 20 minutes	
Link to Gold objectives: Science and Technology 24. Use Scientific Inquiry Skills 28. Use Tools and other Technology to Perform Tasks.	
Essential Questions and Understandings: • Why do people develop a plan to design items before constructing? • How would you design a home, structures or product to use in daily life? • Plans help you organize what you want to do. • Ideas are the starting point for planning. • Design helps you think about what material you will use. • People use designs to make prototypes.	
What children will know or do: *(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)* • Develop an idea through discussion. • Design a plan for acting on an idea. • Select materials for acting on a design. • Use designs and materials to bring idea to life. • Evaluate plans • Redesign and act/construct if interested and if time permits.	
Content specific learning objective(s): **Standard SEL12:** The child will demonstrate the ability to reflect on and evaluate the results of his or her actions and decisions. **Guideline 24**-Demonstrate and explain the safe and proper use of tools and materials. Link to Safe and Proper Tools and Materials Standard 1.3 **Guideline 25**-Explore and identify simple machines such as ramps, gears, wheels, pulley, and levers through play experience. Link to Design2.1 **Physical Science:** Pre-K PS1-2: Investigate the natural and human made natural and human made objects; describe, compare, sort, and classify based on observable physical characteristics, uses and whether something is manufactured or occurs in nature. **PreK-PS2 Motion and Stability** 2.1 Using evidence, discuss ideas about what is making something move the way it does and how some movements can be controlled. 2.2 Through experience, develop awareness of factors that influence whether things stand or fall. Language objective(s): • Use language to discuss plans and designs with others. • Explain ideas and design to others. • Explain why materials were selected. • Describe the process of planning, designing, creating, and evaluating to others.	

Procedure:
After reading My Dream Playground, by Kate M. Becker…

Ask children if they are ready for a challenge. Ask them to develop an idea for one of the following design challenges:

1. Build a shelter for Pete the Cat that can protect him from rain or snow.
2. Build a piece of furniture for Pete the Cat
3. Build a piece of a playground for Pete the Cat.
   (If you don't have a Pete the Cat, then use a small classroom stuffed animal).

Remind children that they can work individually or in teams. Model how you can make a plan of a design.
Example- Make a bed for Pete by using four legs attached to a flat surface. Discuss what you will use for the footboard and head board. Talk about what materials might be needed to make it soft for him to sleep in the bed.

Turn the writing area into an architect's office. Place large paper in the area for children to draw their plans. Encourage children to share their plans with peers and in whole group.

Materials needed and/or additional resources:
Idea Paper Markers
Stencils
Large paper for blueprints

Name of activity: Letter play and tools	Week 3
Estimated time: 10-15 minutes	
Link to TSGold objectives: 2: Establishes and sustains positive relationships. 3: Participates cooperatively and constructively in group situations. 7: Demonstrates fine-motor strength and coordination. 8: Listens to and understands increasingly complex language. 9: Uses language to express thoughts and needs. 10: Uses appropriate conversational and other communication skills. 11: Demonstrates positive approaches to learning. 12: Remembers and Connects experiences 15: Demonstrates phonological awareness 16: Demonstrates knowledge of the alphabet 17: Demonstrates knowledge of print and its uses 20: Uses number concepts and operations	
Essential Questions: • How many words in the sentence do you hear? • How many syllables do you hear in a word? • What sound(s) do you hear? • What letter makes that sound? How did you know? Can you think of another word that starts with that sound?	
What children will know or do: *(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)* • Listen to the words to segment number of words in sentence or syllables • Identify the initial sound in words after hearing and saying the word.	
Content specific learning objective(s): English Language Arts: MA.2.b.With guidance and support, segment words in a simple sentence by clapping and naming the number of words in the sentence. MA.2.c. Identify the initial sound of a spoken word and, with guidance and support, generate several other words that have the same initial sound.	
Language objective(s): • Identify and use names of tools. • Identify sounds heard in words. • Produce sounds heard in words.	

Procedure: Give each child 6 Duplo blocks, goggles, and (construction tape) barrier.
Tell children you will read a sentence from the book Old MacDonald had a Woodshop and that you want them to put one block down for each word heard in a sentence/each syllable in a word.
Their job is to place a block down for each word heard in the sentence or each syllable heard in words. Remind them that listening is important and after everyone puts down their blocks you compare and discuss.

Words in sentences:

1. Old MacDonald had a shop. (5)
2. She had a saw. (4)
3. Her drill went "rur rur." (5)
4. In her shop she had tools. (6)
5. The hammer went tap. (4)
6. Her paintbrush went swish swash. (5)

Syllables in words:
If children are ready do it, use with syllables in following words: hammer, wrench, plier, saw, drill, chisel, screwdriver, pulley.

After you do it 4-5 times in your small group, stop. Then show pages 13 and 14 in Old MacDonald Had a Woodshop. Read the text on both pages. Talk about all the sounds (scratch stratch; clip clip; tap tap; rurr, rurr, and zztt, zztt). Talk about how some are words and some are sounds. Discuss how letters represent sounds.

Ask children to each generate a sound that they think a tool makes. Ask peers to think about what letter might make that sound. For example, Anna says, "The pulley went clickty, clickty." When asked "What does clickty start with?" children might respond "It starts with K." Talk about how C and K can both make the /k/ sound.

"The saw went zzz." Talk about how this is a sound only made by the letter, not a word /z/.

Materials needed and/or additional resources:
Tool box, Googles, Pretend tools or pictures of tools (hammer, wrench, pliers, saw, drill, mallet, paint brush), 4 barriers made using construction tape and photocopied onto oak tag, 24 Duplo blocks

Name of activity: Design Challenge Part 2	Week 3
Estimated time: 20 minutes	
Link to TSGold objectives: Science and Technology 24. Use Scientific Inquiry Skills 28. Use Tools and other Technology to Perform Tasks.	
Essential Questions: • People use plans to guide them in construction using their designs. • A plan helps you organize what you are doing in what order. • Innovations and ideas require an idea, plan, design, material selection, prototype, redesign, and execution. • Materials are selected to support the use and design of products as they are constructed.	
What children will know or do: *(Utilize Standards for Mathematical Practices, Inquiry-based instruction, and Bloom's Taxonomy)* • Develop and idea through discussion. • Design a plan for acting on idea. • Select materials for acting on design. • Use design and materials to bring idea to life. • Evaluate plan • Redesign and act, if interested and if time permits.	
Content specific learning objective(s): **Standard SEL12:** The child will demonstrate the ability to reflect on and evaluate the results of his or her actions and decisions. **Guideline 24**: Demonstrate and explain the safe and proper use of tools and materials. Link to Safe and Proper Use of Tools and Materials Standard 1.3 **Guideline 25**: Explore and identify simple machines such as ramps, gears, wheels, pulley, and levers through play experience. Link to Design Standard2.1 **Physical Science:** Pre-k PS1-2 Investigate the natural and human made natural and human made object, describe, compare, sort, and classify based on observable physical characteristics, uses and whether something is manufactured, or occurs in nature. **PreK-PS2 Motion and Stability:** 2.1 Using evidence, discuss ideas about what is making something move the way it does and how some movements can be controlled. 2.2 Through experience, develop awareness of factors that influence whether things stand or fall. Physical Science PreK-PS1-2: Investigate the natural and human-and made objects; describe, compare, sort and classify objects based on observable physical characteristics, use, and whether something is manufactured or occurs in nature. Language objective(s): • Use language to discuss plans and designs with others. • Explain ideas and design to others. • Explain why materials were selected. • Describe the process of planning, designing, creating, and evaluating to others.	

Procedure:
After reading The Most Magnificent Thing by Ashley Spires. Encourage children to begin selecting materials for to make their design. Let them know that if it doesn't work, it's okay.

Remind children about the challenge you have for them to develop an idea for one of the following design challenges:

1. Build a house for Pete the Cat.
2. Build a piece of furniture for Pete the Cat
3. Build a piece of playground equipment for Pete the Cat.

Remind children that they can work individually or in teams to begin to follow their design plans. Explain that if the plan does not work the first time it fine to revise the plan by revisiting the writing areas, selecting new materials and trying again.

Encourage children to visit the Science area to test out the stability, flexibility, and strength of various materials they are considering using to construct their design plan.

Materials needed and/or additional resources: Idea paper, Markers, Stencils, Large paper for blueprints

Name of activity: Making Bridges (modified from kidsactivitiesblog.com AND deceptively education.blogspot.com)	Week 4

Estimated time: 30 minutes

Link to TSGold objectives:

20. Explores and describes spatial relationships and shapes
    a. Understands spatial relationships
21. Compares and measures.
26. Demonstrates knowledge of the physical properties of objects and materials

Essential Questions:

- How can we make the bridge sturdier/stronger?
- What parts of the bridge need to be stabilized for it to stand on its own?
- (vertices is a previously taught word that is in our shape unit)
- Would we be able to construct a taller/longer bridge?
- How can you change your design to hold more cars or pennies (for the other "center of bridge" building activity)?

What children will know or do: *(Utilize Standard Mathematical Practices, Inquiry based instruction, and Bloom's Taxonomy)*

- The children will construct a bridge that stands on its own.
- The children will use materials provided to determine how to construct a bridge through problem solving.
- The children will work in a small group to work together to achieve a common goal.
- The children will see how different designed bridges can hold many/fewer items depending on the design.

Content-specific learning objective(s):

MA.PK.SL1 Participate in collaborative conversations with diverse partners during daily routines and play.
MA.PK.SL3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
MA.PK.SL5 Create representations of experiences or stories (e.g. drawings, constructions with blocks or other materials, clay models) and explain them to others.
MA.PK.G3 Create and represent three-dimensional shapes (ball/sphere, square box/cube, tube/cylinder) using various manipulative materials (such as popsicle sticks, blocks, pipe cleaners, pattern blocks).'
MA.PK.PS.5 Objects can be balanced under some conditions.

TSGold Objectives:

- Objective 8: Listens to and understands increasingly complex language.
- Objective 10: Uses appropriate conversational and other communication skills
- Objective 18: Comprehends and responds to books and other texts.

Procedure:
The teacher will read the book Bridges Are to Cross to the class. Point out that there are many different types of bridges around the world. They are all different, but they all help people to move items across it to get to another destination. After reading the book, the children will work in pairs to construct a bridge using the materials listed below. Pictures of bridges will be provided for the children to refer to. The teacher will facilitate and ask leading questions as the children work together to construct a bridge. After they are done, meet and discuss their findings in a closing circle. List their findings on chart paper.

UDL/SPECIAL EDUCATION/DIFFERENTIATION ACTIVITY
Use colored pictures of bridges to create puzzles for the children to put together. Print pictures onto cardstock and laminate them, then cut them into pieces. Children can work with a partner to "build the bridge." Discuss the types of bridges they may be (arch, beam or suspension).

[Example: a student who is at a 14-month-old level might be able to put together a simple puzzle with assistance by adding the song "London bridge is Falling Down" with hand motions to hold her interest.]

Use mathematical language such as:

- Vertices: the spot where lines meet to form a point on a three-dimensional shape.
- Face: a surface that forms part of an object or three dimensional solid and is flat.
- Edges are the sides of a three-dimensional shape.

FOLLOW UP ACTIVITY BRIDGE DESIGN
Children will work in small groups to test out differently designed bridges (e.g., box bridge, folded bridge, collapsed oval bridge and single strip bridge) using the materials listed below. They will test out how sturdy the bridge is by seeing if it can hold pennies. The teacher will lead discussions on what they can do alter the design of their bridge to hold more pennies, or change the design to make it stronger. Display the children's bridges and discuss with the class.

Materials needed and/or additional resources:

- Book Bridges Are to Cross by Philemon Sturges (Published by Putnam,1998)
- Paper clips
- Straws of different lengths
- Scissors, duct tape, cars
- Flat cardboard (for the road to go over the bridge)

BRIDGE DESIGN ACTIVITY

- Large plastic solo cups
- Construction paper 2 pieces
- Tape, pennies

BRIDGE PUZZLE ACTIVITY (SPECIAL EDUCATION/DIFFERENTIATION)

- Different colored pictures of bridges
- Print onto cardstock
- Laminate
- Cut the bridges into puzzle pieces
- Put together to make a puzzle

ASSESSMENT
While the children are in the process of creating their bridges, pose questions and see how they answer to determine their understanding. When the bridges are done, take a picture of them with their structure to put into their portfolio.

Invention Learning Stations
These are learning stations to support student inventions.

Station 1: What Are These Tools Used For?
Objectives: Students will know what common objects are used for.
Materials: kitchen tools and other tools such as a level or wrench
Instructions: Look at the tools and try to figure out their use. Talk together about what aspects of the tools give clues to their use. Draw a picture of each tool and what it is used for.

Station 2: Name the Tools
Objectives: The student will know the names of common tools.
Materials: Labeled tools, such as a manual can opener, fly swatter, scissors, pancake turner, screwdriver and screw, balance, and egg beater
Instructions: At this station are useful tools. The tools are labeled. Students can write the letters they hear in the tool or try to label the tools.

Station 3: Using the Tools
Objective: Students will use the tools to create something new.
Materials: Tools and other creating materials. Can be recycled materials like milk caps, boxes of cereal, buttons, anything.
Instructions: Students will use the tools to create something new.

Things needed for Module 4
"We All Have Ideas"

Materials/supplies needed:

- Tool box with tools (p.13 in in module book)
- Balance scale (p.13 in module book)
- Nuts and bolts (p.13 in module book)
- Wet sand (p.14 in module book)
- Different shaped plastic containers for sand (p.14 in module book)
- Shovels (p.14 in module book)
- Variety of recyclable materials for weighing and building (p.15 in module book)
- Attribute blocks and cards (p.15 in module book)
- Large paper to cover a table (p.15 in module book)
- Shapes to make a shape collage (p.15 in module book)
- Bean bags (p.15 in module book)
- Geoboards and elastics (p.15 in module book)
- Tracing paper, graph paper (p.16 in module book)
- Shape tracers, protractors, rulers (p.16 in module book)
- Painter's tape (p.17 in module book)
- Materials for Dramatic play to be turned into Construction Site, The Big Dig or Three Little Pigs retell (p.124-128 resource pack)
- Straws and play dough (p.22 in module book)
- Pretend tools (in Dramatic play, p.23 in module book)
- Boxes and paper tubes for marble mazes (p.29 in module book)
- Golf tees, hammers, screws, screwdrivers, goggles, Styrofoam (p.27)
- Pattern blocks and activity cards (p.31)
- Small rocks or counting bears (p.34)
- Play sticks or Lincoln Logs (p.35)
- Construction vehicles (p.37 in module book)
- Foam 3D blocks (p.39 in module book)
- Foam soap or floam recipe (p.39)
- Putty knife (p.39)
- Velcro dots and popsicle sticks (p.40)

Materials/supplies to make/print/copy/obtain:

- "This is the Way We Build a House" on chart paper (p.85-86 in resource pack)
- "Johnny Works with One Hammer" on chart paper (p.87)
- "The Ants Go Marching" on chart paper (p.119-120 in resource pack)
- "London Bridge is Falling Down" on chart paper (p.13 in in module book)
- "If We Built a House" class book (p.121-23 in resource pack)
- "We Can Fix It" class book (p.142 in resource pack)
- Various cut out shapes for collages (p.15 in module book)
- Large cut out shapes (p.16 in module book)
- Bean bags (p.16 in module)
- BINGO and WORD CARDS (p.207-215, 216-222 in resource pack)
- Print out design challenges (p144, p.185 in resource pack)
- Light/heavy T chart to record during weighing objects (p.15 in module)
- Examples of bridges (p.195-202 in resource pack)
- "Saw, Hammer, Tape Measure" on chart paper (p.176 in resource pack)
- Letter play and Tools activity (p.182 in resource pack)
- Block structure examples (p146, 187-194 in resource pack)
- Homemade books for student's stories (p. 36 in module)
- Feely box (p.38 in module)
- Paper rolls made from rolled newspaper and tape (p.40 in module)
- Print out Alphabet Bingo (p.39 link in module)
- Make glitter ice cubes (p.39 in module)
- Print out patent applications (p.236-237 in resource pack)
- Straight or Curved lesson plan(p.248 in resource pack)
- Race to the Letter Lesson plan (p.249 in resource pack)
- Structure Book (p.146-175 in resource pack)
- "Old MacDonald Had a Tool Belt" on chart paper (p.227-228 in resource pack)
- US historical structures (p.251-260 in resource pack)

Books for Dialogic Reading:

- *What do you do with an Idea?* by Kobi Yamada (pp.49-50 in module book)
- *Building a House* by Bryon Barton (pp.51-54 in module book)
- *If I Built a House* by Chris Van Dusen (pp.55-57 in module book)
- *Dig, Dig, Digging* by Margaret Mayo (pp.58-60 in module book)
- *My Dream Playground* by Kate Becker (pp.61-63 in module book)
- *The House in the Meadow* by Shutta Crum (pp.64-66 in module book)
- *The Three Little Pigs* by Patricia Siebert (pp.67-68 in module book)
- *The Most Magnificent Thing* by Ashley Spires (pp.69-71 in module book)
- *The Three Little Pigs and the Somewhat Bad Wolf* by Mark Teague (pp.72-73 in module book)
- *A House in the Woods* by Inga Moore (pp.74-76 in module book)
- *Construction Zone* by Tana Hoban (pp.77-78 in module book)
- *Night Worker* by Kate Banks (pp.79-81 in module book)

Other:

- *Tool Book* by Gail Gibbons (p.13 in module book)
- *How a House is Built* by Gail Gibbons (p.12 in module book)
- *Changes, Changes* by Pat Hutchins (p. 13 in module book, p.117-18 resource pack)
- *Cubes, Cones, Cylinders and Spheres* by Tana Hoban (p.15 &19 in module book, p.129-30 resource pack)
- *How Do You Lift a Lion* by Robert Well (p.15 in module book)
- *Old MacDonald Had a Woodshop* by Lisa Shulman (p.18)
- *Pete the Cat: Construction Destruction* by James Dean (p.18)
- *Not a Box* by Antoinette Portis (p.18 in module book)
- *Alphabet Under Construction* by Denise Fleming (p. 22)
- *Night Worker* by Kate Banks (p.79 module book)