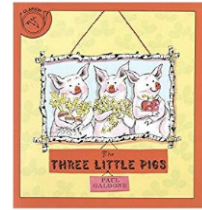


## Unit 3: Construction

### WEEK 1, Day 1



### Math Center: Construction Introduction

Children compose and decompose numbers in bundles and loads.

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| <b>Big Ideas</b>                 | <p>Children will communicate mathematically through multiple forms of expression.</p> <p>Children will persevere in solving questions with a growth mindset.</p> <p>Children will solve mathematical problems using a variety of strategies.</p> <p>Children will make sense of the world around them through mathematics.</p> <p>Children will connect math to other learning and real-world examples.</p> <p>A strong, interdependent math community has qualities, such as:</p> <ul style="list-style-type: none"><li>• shared responsibility, collaboration and support for each other.</li></ul> |
| <b>Guiding Questions</b>         | <p>What does it mean to be a member of a math community?</p> <p>How do you use math tools?</p> <p>How do you most effectively communicate your mathematical thoughts and ideas?</p> <p>Why is collaboration and listening to the ideas of others important?</p>                                                                                                                                                                                                                                                                                                                                       |
| <b>Vocabulary</b>                | <p><b>compose:</b> putting a number together using its parts</p> <p><b>decompose:</b> breaking down numbers into parts</p> <p><b>total:</b> a whole or complete amount; altogether; in all</p> <p><b>represent:</b> using models to organize, record, and communicate mathematical ideas.</p> <p><b>tool:</b> an item that you use to help you do something.</p>                                                                                                                                                                                                                                      |
| <b>Materials and Preparation</b> | <ul style="list-style-type: none"><li>• <i>The Three Little Pigs</i> vocabulary cards</li><li>• vehicle toys of various sizes</li><li>• twine or string</li><li>• popsicle sticks and sticks from trees</li><li>• a variety of math tools or loose parts such as: pattern blocks, connecting cubes and two-colored counters. Add more “supplies”</li></ul>                                                                                                                                                                                                                                            |

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|                         | <p>throughout the week.</p> <ul style="list-style-type: none"> <li>• various writing and drawing tools as needed for children to use</li> </ul> <p>Complete the Day 1 Read-Aloud lesson of <i>The Three Little Pigs</i> by Paul Galdone and the first Shared Reading “Popsicle Sticks and Glue” prior to introducing this Center.</p> <p>Document through photographs or save examples of children's work to use in the Intro to Centers next week.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Intro to Centers</b> | <p><i>Today we are starting a new unit about construction! To construct means to create and build. Today we read a story called The Three Little Pigs where the characters built houses out of different materials - straw, sticks, and bricks. We also read a poem titled “Popsicle Sticks and Glue.” While reading these and thinking about constructing and putting things together, I realized that we have done a lot of work in the Math Center this year around construction already! We can construct many different things. We can even construct numbers by putting them together and taking them apart!</i></p> <p><i>Can you think about how we have used tools and materials to construct?</i></p> <p>Show children tools at the math center, such as popsicle sticks, string, toy vehicles, and various math tools/loose parts.</p> <p><i>At the Math Center this week, we will explore creating bundles and loads with different materials, just like the Three Little Pigs. As you create bundles and loads, think about how math and counting helps you.</i></p> <p>Describe the expectations for cleaning up and leaving the area when finished.</p> <p><i>When you are finished at the Math Center, put your supplies back where they belong so they are ready for the next person to use. Organizing materials and cleaning up are important responsibilities in Kindergarten.</i></p> <p>Show where the math tools belong when they are put away.</p> |
| <b>During Centers</b>   | <p>Children use the materials at the Math Center to create bundles and loads. Children explore which materials can be tied together to create a bundle of items and grouped into a pile as a load. Children may pretend they are the Three Little Pigs collecting the materials they need (or some other imagined purpose for gathering building supplies). Children may count while creating their larger group out of individual items.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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|                     | <p>Follow the children’s lead and use precise mathematical vocabulary to narrate what they are doing. Direct their attention to how their loads and bundles can be counted and broken into smaller parts, or how smaller parts can be put together to build larger loads and bundles. While children might create bundles and loads larger than they can count, focus their attention to groups within 10.</p> <p>Take observational notes about children’s exploration and language.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Facilitation</b> | <ul style="list-style-type: none"> <li>• Encourage children to use sentences about their bundles and loads, such as: “My load has _____ [5 pattern blocks],” “I have _____ [7 popsicle sticks] in my bundle,” and “I have _____ [list number of items] altogether.”</li> <li>• Encourage children to use the words “first,” “next,” and “then” when they retell how they decided and make their loads/bundles.</li> <li>• Can you count how many you have in your bundle/load?</li> <li>• What is the same about each of these loads/bundles? What is different?</li> <li>• What parts do you see in _____’s load/bundle?</li> <li>• How are you choosing the types of materials to use in your bundle/load?</li> <li>• I wonder if you could fit both _____ [name 2 supplies] in that truck.</li> <li>• What strategies helped you the most today?</li> </ul> <p>Upcoming daily extension opportunities:<br/> Week 1, Day 2: After the Block Center lesson or Writing &amp; drawing lesson on Day 2, display the <a href="#">Engineering design process visuals</a> in the Math Center. Incorporate some of the language, asking questions around creating loads/bundles, such as:</p> <p style="padding-left: 40px;"><i>ASK: What are you trying to accomplish? How have other classmates approached it?</i></p> <p style="padding-left: 40px;"><i>IMAGINE: What are some solutions to your problem? Let’s brainstorm ideas and choose the best one.</i></p> <p style="padding-left: 40px;"><i>PLAN: Can you draw a diagram or make a list of needed materials?</i></p> <p style="padding-left: 40px;"><i>CREATE: : What plan are you following to create something?</i></p> <p style="padding-left: 40px;"><i>IMPROVE: What worked? What didn’t? What could work better? How could you modify your design to make it better?</i></p> <p>As children begin to work, encourage them to refer to the Engineering Design Process and to use the images as inspiration. Invite children to imagine what to build with their bundles and loads and to think about the types of bundles and loads they might need for a particular idea.</p> <p>Other possible extension opportunities:</p> |

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|                  | <ul style="list-style-type: none"> <li>● Throughout the week, add new materials to the math center for children to use to create loads/bundles</li> <li>● Incorporate math language into the Art Studio around composing and decomposing a whole clay piece out of smaller clay parts.</li> <li>● Have children write math expressions, such as <math>3 + 3</math>, to label bundles/loads or add to other centers (For example: How many parts went into the whole costume you created in dramatization? How many books are fictional and informational in this tub?)</li> <li>● Display numbers between 5-10 at the math center. How can children make bundles/loads of those amounts using different combinations of materials (For example, I can make a load of 5 by having 2 blocks and 3 counters or a bundle of 5 with 4 popsicle sticks and 1 twig).</li> <li>● Children can write and make “delivery checklists” for other children to prepare (For example: I need 2 loads of blocks and 1 load of sticks).</li> </ul> |
| <b>Standards</b> | <p><b>Building Towards:</b></p> <p><b>QR.C.1</b> Know the number names and the count sequence.</p> <p><b>QR.C.2</b> Count to tell the number of objects.</p> <p><b>AR.C.1</b> Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</p> <ul style="list-style-type: none"> <li>● <b>K.OA.A.1; K.OA.A.3; K.OA.A.4; K.OA.A.5</b></li> </ul> <p><b>Standards for Mathematical Practice: 1-8</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| <b>Notes</b> |
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