

Bridges in Mathematics Pre-K Unit 5

January

Mittens, scarves, and snow people provide contexts for counting and comparing, sorting, graphing, and solving story problems this month. In this unit, your child will:

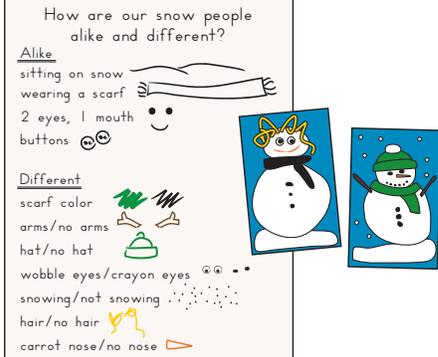
- Count, compare, read, and write numbers within 10
- Show and solve simple story problems
- Describe similarities and differences, and use them to sort objects in various ways
- Find, describe, copy, and extend patterns

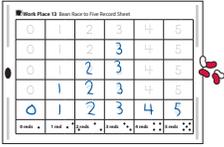
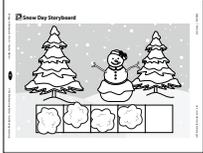
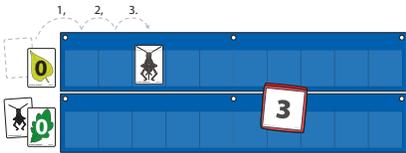
Your child will learn and practice these skills by doing activities and playing games like those shown below.

How are our snow people alike and different?

Alike
 sitting on snow
 wearing a scarf
 2 eyes, 1 mouth
 buttons

Different
 scarf color
 arms/no arms
 hat/no hat
 wobble eyes/crayon eyes
 snowing/not snowing
 hair/no hair
 carrot nose/no nose



ACTIVITY OR GAME	COMMENTS
<p>Play Bean Race to Five.</p> 	<p>Children shake and spill 5 double-sided beans. They determine how many land red-side up and trace the matching number on their record sheet. They repeat these steps until one column reaches the top, although many choose to continue until all the columns are filled. This simple game provides lots of practice quickly recognizing small groups, reading and writing numbers, and comparing sets. (Look how many 3s I have! They're more than the 2s!) As they play, children are also developing a sense of the combinations that make up 5—1 red and 4 whites, 2 reds and 3 whites, and so on.</p>
<p>Show and solve snow day story problems.</p> 	<p>Each child gets a storyboard and 5 cotton balls and uses them to solve simple counting, addition, and subtraction story problems.</p> <ul style="list-style-type: none"> • Sam made 4 snowballs and lined them up on the ground. Can you show Sam's snowballs on your board? How many are there? • Brianna made a line of 3 snowballs. Then she added 2 more to the line. How many are there now? • Tomas made a line of 4 snowballs. Then he threw 2 of them at the big fir tree. How many snowballs did Tomas have left?
<p>Race Chirpy and Lil' Green along the number paths.</p> 	<p>Children roll a die to show how many hops each cricket gets to take, and then together they count those hops. This prepares them for the board games they will play over the next few months. Just like when they move a certain number of spaces on a game board, they must count the hops between spaces rather than the spaces themselves. This is called interval counting, and if you've ever tried to teach a 4-year-old not to count the starting space on a board game as 1, you know how challenging it can be.</p>
<p>Make, sort, and graph snow people.</p> 	<p>Children make their own snow people. The snow people have a lot in common, and they are also different in many ways. Children compare their snow people, sort them into groups based on what they have in common, create a graph, and count them.</p>
<p>Find and describe patterns.</p> 	<p>The teacher reads a new book, <i>Mittens 1 to 10</i>, which includes some number patterns. Children notice repeating patterns: 1 mitten, 2 mittens; 1 mitten, 2 mittens; or 1 cold hand, 2 warm hands; 1 cold hand, 2 warm hands. Others notice there is 1 more mitten on each page. They also discover that to make pairs of mittens, every mitten needs a match. If you have 3, 5, 7, or 9 mittens, one hand gets left out in the cold.</p>

FREQUENTLY ASKED QUESTIONS ABOUT UNIT 5

Q: Can you suggest any math apps for preschoolers?

A: While the technology we use in our daily lives has changed dramatically over the past few decades, four-year olds haven't. No amount of screen time, no matter how interactive, can replace the messy, hands-on experiences with real stuff that preschoolers need all day, every day. At the same time, there is a growing number of valuable and interesting apps for young children. Some involve onscreen versions of math materials the children have handled extensively in class. Two of these are described below. Both are free and available in two or more versions: a web app for laptop or desktop computers, and downloadable versions for specific operating systems and devices (such as Apple iOS for iPad). Look for them by name at the Apple App Store, Windows Store, Chrome Store, or go to <https://www.mathlearningcenter.org/resources/apps> and click on Open Web App to put the app on your laptop or desktop screen immediately.

Note that these apps aren't games or animated worksheets with dancing dragons popping out each time your child gets the right answer. They are likely to be of greatest interest to your child if you participate, offering questions and problems, or making up games together.

Pattern Shapes are digital versions of the pattern blocks we use in class. Preschoolers can pull shapes onto the screen and put them together to make pictures, designs, and patterns. It's easy to move, turn, and copy the shapes, or even change their size or color. Children can enhance their pictures by drawing on them with the virtual pen. Some children might enjoy filling in outlines provided in the app, much as they do the pattern block picture mats at school.

Number Frames help children count and organize groups of counters like dots, ladybugs, frogs, and penguins. They can count the objects with or without the support of frames (grids of boxes for organizing the objects in rows and columns). Here are a few suggestions.

- **How Many?** Drag a five-frame onto the screen and fill the first three boxes with counters. Ask your child how many there are. The goal is for children to recognize up to 5 counters without counting each one, but children can count if needed. Repeat with other numbers from 1 to 5.
- **How Many More?** Fill the first 1, 2, 3, or 4 boxes on the five-frame and ask your child how many more it would take to fill the frame. Then invite them to fill the rest of the boxes with a different color or type of counter.
- **Ten-Frames** You can do both of the activities above with the ten-frame on the app. If you have a deck of cards around the house, you can try another fun game. Have your child help you find all the aces, 2s, and 3s in the deck. Shuffle these and put the rest aside. Take turns drawing a card and adding that many new counters to the ten-frame. The first to fill the frame wins.

A few of our favorite books for this time of year:

- *Mouse Count* by Ellen Stoll Walsh
- *Teddy Bear Counting* by Barbara McGrath
- *Twenty Big Trucks in the Middle of the Street* by Mark Lee
- *Have You Seen My Dragon?* by Steve Light
- *Chicka, Chicka 1, 2, 3* by Bill Martin Jr.

For more ideas and resources, go to www.mathlearningcenter.org/families