

Celebrate Winter With A Hands-On Mathematics Carnival!

by Nancy Silva

Chase away the January blues by holding a hands-on winter Mathematics Carnival in your classroom! If snow and cold weather are keeping your class inside, a winter carnival will lift their spirits. Children living in warmer climates will be delighted to take part in a variety of winter activities relating to snow, cold, and ice! Plan an exciting day of challenging competitions designed to strengthen problem-solving skills and reinforce basic mathematics skills.

Divide the children into teams of four to six, depending on the class size. Invite each team to choose a wintry name. Offer a few suggestions, such as the Super Snowballs, the Blazing Blizzards, and the Fantastic Flurries. Post the teams' names across the chalkboard or classroom wall. Below each name, place a clear jar or bowl. As points are earned throughout the carnival, drop the appropriate number of "snowballs" (cotton balls) into the jars to record the score.

The Great Snowball Grab

A large bowl of mini-marshmallows and a thick, colorful mitten are all you'll need for this exciting estimating activity! Provide each child with a 5" x 5" piece of paper, split by a diagonal line. Challenge the children to estimate the number of "snowballs" (mini-marshmallows) that they will be able to grab while wearing the mitten. Ask the children to write their estimate above the diagonal line. The fun begins as each child steps forward, puts on the mitten, reaches into the bowl, and grabs as many snowballs as possible. Only one grab is permitted. The competitors must have a firm hold on their snowballs before being allowed to drop the handfuls onto paper plates set beside the bowl. As a class, count each plate of snowballs, then have each child record his or her number of snowballs below the diagonal line. The children should then calculate the difference between their estimate and the actual number of snowballs grabbed from the bowl. Invite the children to share their differences. Identify the three children with the smallest differences. Also recognize the three children who were able to grab the greatest number of snowballs. Award the appropriate number of snowballs to each child's team.

Scoring Points:

Smallest Differences—first: 3 snowballs; second: 2 snowballs; third: 1 snowball

Greatest Grab—first: 3 snowballs; second: 2 snowballs; third: 1 snowball



Standing Snow Boot Jump

Reinforce measurement in inches and feet with this entertaining activity! Attach a six-foot strip of masking tape to your classroom floor or carpet. At one end, clearly mark a starting line using a smaller piece of tape. You'll also need a tape measure marked in inches and a pair of adult snow boots. Invite each child to put on the boots, stand with toes behind the starting line, and jump as far as possible. Invite the children to assist you in measuring the length of each jump. Record the results on a class chart. When each class member has made his or her jump, discuss the results. Identify the five longest jumps. Award the appropriate number of snowballs to each child's team.

Scoring Points:

Longest Jump—first: 5 snowballs; second: 4 snowballs; third: 3 snowballs; fourth: 2 snowballs; fifth: 1 snowball



Ice Melt Mania

Your class will "warm up" to this icy team estimating activity! Prepare a tray of ice cubes tinted with blue food coloring. Provide each group with a small, clear glass jar or bowl, a spoon, and a stopwatch. Challenge each group to estimate the number of minutes or seconds that it will take for a blue ice cube to melt when placed in a jar or bowl containing hot water. Invite them to write their estimates on a piece of paper. Fill each jar or bowl with hot water before dropping a blue ice cube into it. Have one child in each group use the stopwatch to measure the passing time. The

children may stir the water with the spoon to speed up the melting process, or just sit and watch as the cube dissolves. Instruct students to press STOP on their stopwatches when the cube has completely melted. Assist the teams in finding the difference between their estimates and the actual times. List the differences on a chart. Identify the three smallest differences. Discuss which teams chose to use their spoon. Award the appropriate number of snowballs to each of the three winning teams.

Scoring Points:

Smallest Difference—first: 3 snowballs; second: 2 snowballs; third: 1 snowball



The High Cost of Keeping Warm

Three colorful winter scarves are the focus of this challenging event involving estimating, measurement, and the addition of money. Display the scarves on a large table or on the classroom floor. Label the scarves with the numbers 1, 2, and 3. Provide each child with a small piece of paper before inviting the class to get up and closely examine the size of each scarf. Challenge the children to estimate:

Scarf 1: the value of the scarf's length, measured in quarters

Scarf 2: the value of the scarf's perimeter, measured in dimes

Scarf 3: the value of the scarf's area, measured in pennies

After the estimates have been recorded, invite the children to work together to place quarters along Scarf 1, outline Scarf 2 using dimes, and fill in Scarf 3 using pennies. Assist the class in identifying the value of each scarf by counting the coins and multiplying by the coin's value. Post the three values on the chalkboard. Ask the children to identify the differences between each of their three estimates and the actual values of the scarves. Identify the three smallest differences for Scarf 1, Scarf 2, and Scarf 3. Award the appropriate number of snowballs to each child's team.

Scoring Points:



Smallest Difference—Scarf 1: first: 3 snowballs; second: 2 snowballs; third: 1 snowball; **Scarf 2:** first: 3 snowballs; second: 2 snowballs; third: 1 snowball; **Scarf 3:** first: 3 snowballs; second: 2 snowballs; third: 1 snowball

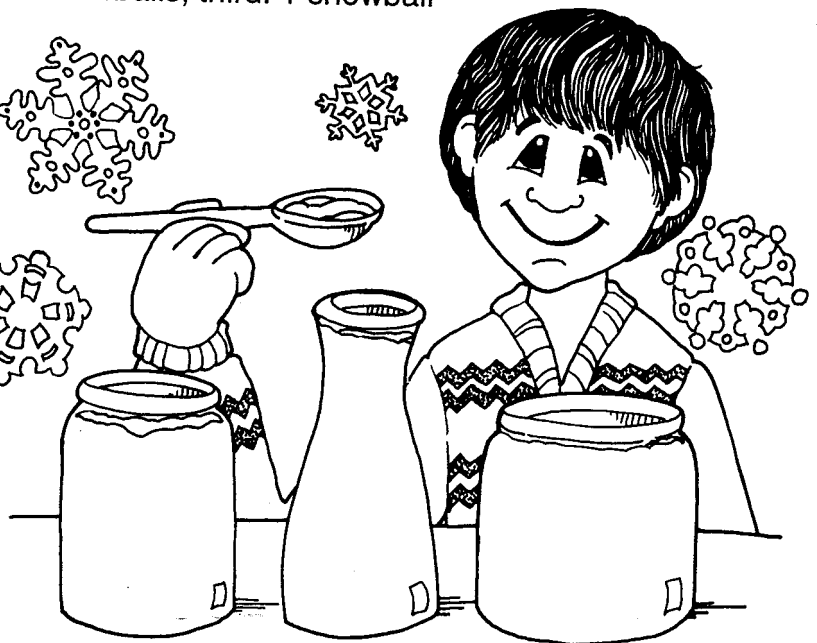
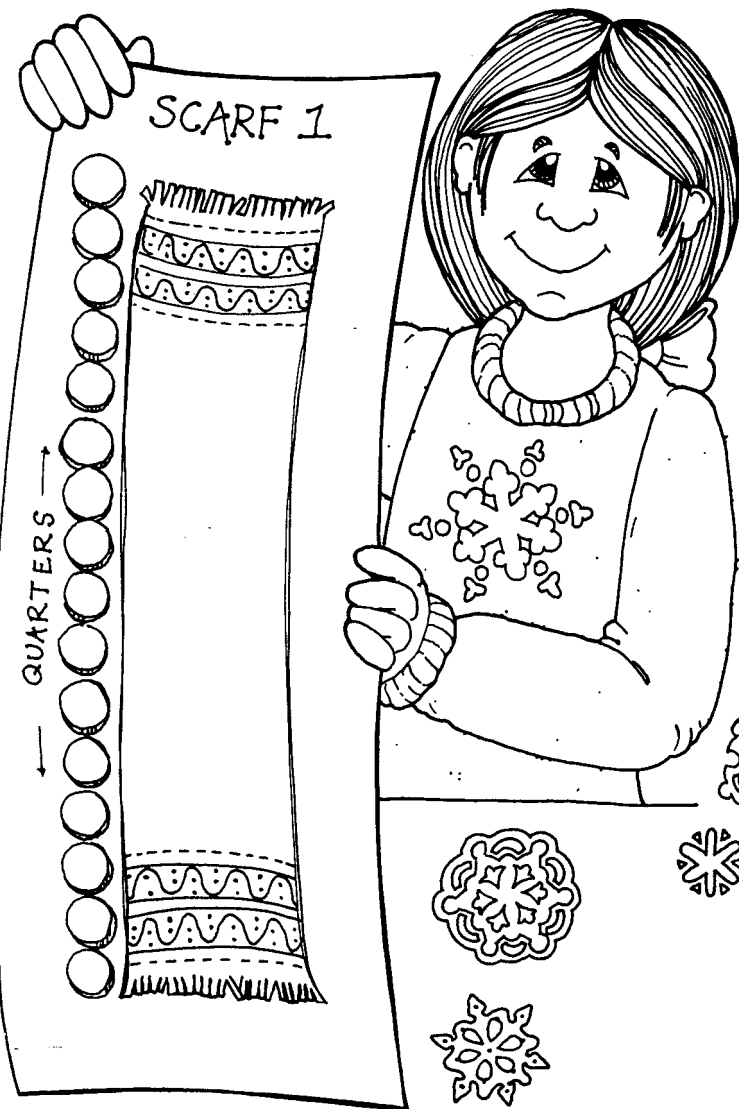
Snow Shoveling Estimation

Snow removal has never been so much fun! Display three large, clear glass jars in a variety of sizes and shapes. Fill each jar with "snow" (flour). Pass several "snow shovels" (teaspoons) around the classroom for the children to examine. Challenge the children to estimate the number of "shovels" full of "snow" in each of the three jars. After the estimates have been recorded on paper, invite the class to help with the shoveling. Encourage the children to think of time-saving methods that may be used to measure the amount of snow in the jars. Discuss each suggestion. Be sure to have a set of measuring cups standing by. One clever snow shoveler is sure to suggest identifying the number of teaspoons in one cup and then using the cup to remove and measure the snow. Work together to empty the snow from jars 1, 2, and 3. Ask the class to identify the difference between their three estimates and the actual number of shovels in each jar. Identify the three children who had the smallest differences for each jar. Award the appropriate number of snowballs to each child's team.

Scoring Points:



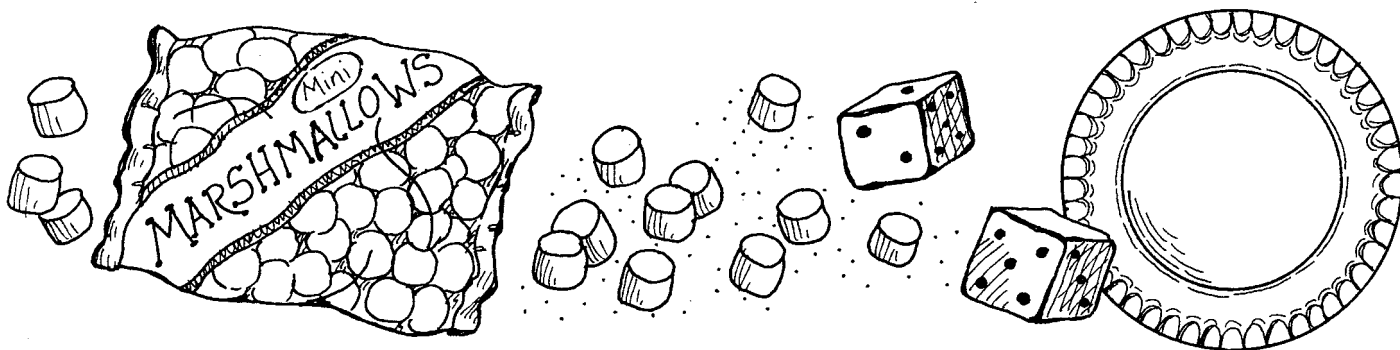
Smallest Difference—Jar 1: first: 3 snowballs; second: 2 snowballs; third: 1 snowball; **Jar 2:** first: 3 snowballs; second: 2 snowballs; third: 1 snowball; **Jar 3:** first: 3 snowballs; second: 2 snowballs; third: 1 snowball



Blizzard

If you're looking for a *cool* new way to practice your basic addition facts, then Blizzard is the game for you!

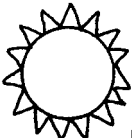
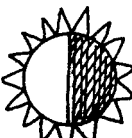
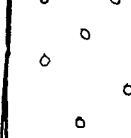
- Number of Players:** 3 to 5
- Each Player Will Need:** 6 white snowball markers (white beans, white stones, mini-marshmallows)
a pair of dice
a paper plate
- Object of Game:** to find sums 2 - 12
to accumulate snowballs by rolling sums of 6, 8, 10, and 12
- Winner:** The player with the most snowballs at the end of a given period of time or the last player left with snowballs.



Directions:

1. Each player places one of his or her six snowballs on the paper plate in the center of the playing surface. This will be called the snowbank.
2. Players take turns rolling the pair of dice. Players must identify the sum of the dice and consult the Weather Forecast listed below to know how many snowballs to put in or take out of the snowbank.
3. Each time the snowbank is empty, each player must put one snowball into the snowbank before play resumes.
4. A player is considered "melted," or out, when all of his or her snowballs are gone.
5. Play continues until a specified amount of time has passed, or until only one player with snowballs remains.

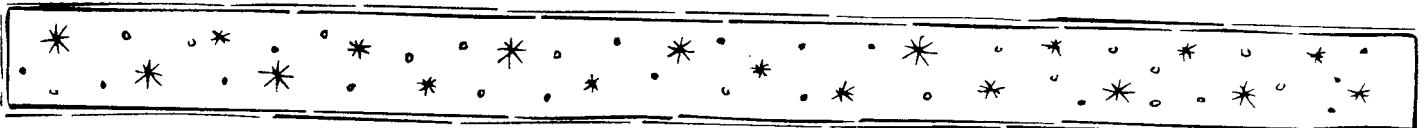


SUNNY	Partly Sun	Light Snow
		

Weather Forecast

Sum:	Weather Condition:	Player Must:
3, 5, 7, 9, 11	cold, cloudy day	do nothing
2	sunny	put in two snowballs
4	partly sunny	put in one snowball
6	light snowfall	take one snowball
8	moderate snowfall	take two snowballs
10	heavy snowfall	take half of snowbank
12	blizzard	take all of snowbank

Snow Colors



I walked in winter
where snow looked blue,
Soft and shaded
with purple, too.

Out by the lake
were fringes of pink,
And silvered snowbanks
glistened and winked.

Then on the hills,
just before night,
Lavender shadows were
stretched out tight—
And I thought snow
was only white!

