

Recommendations for Family Math Nights



- Be creative-integrate mathematics in some way if your school already sponsors a well-attended event. (math/literature night)
- Showcase students in action - PowerPoint presentations showing what they do in math class, readers' theater, etc.
- Have children make invitations.
- Provide refreshments - always a hit!
- Provide daycare, if appropriate.
- Be flexible with the time of your event. Vary the times of the event if you have it more than once to accommodate work schedules of parents.
- Offer prizes - get businesses donations, books, make take-home version of the activities or games played.
- Do not be afraid to start small. Showcase what you do best and build for the next years.

State Standards on Fractions

Kindergarten North Dakota State Standard on fractions

K.1.7. Use concrete materials to represent wholes and halves

First grade North Dakota State Standard on fractions

1.1.8 Represent and explain fractions (i.e., one half, one fourth) as part of a whole and part of a set using concrete materials/drawings

Second grade North Dakota State Standard on fractions

2.1.11 Represent and explain fractions (i.e., one half, one third, one fourth, one sixth and one eighth) as part of a whole and part of a set

Third grade North Dakota State Standard on fractions

3.1.9 Represent fractions and mixed numbers using words, numerals and physical models

Fourth grade North Dakota State Standard on fractions

4.1.15 Add and subtract fractions and mixed numbers with like denominators

Fifth grade North Dakota State Standard on fractions

5.1.11 Compare equivalent fractions, decimals and percents, e.g., $75/100 = .75 = 75\%$

Sixth grade North Dakota State Standards on fractions

6.1.1. Use a fraction to represent parts of a whole, division or a ratio

6.1.3. Find the equivalent forms among fractions, decimals and whole number percents

6.1.4. Compare and order fractions, decimals, mixed numbers and integers

Administrator Background Information

To strengthen our home school partnership in the area of math we have planned a family math night for (topic area) from 7-8:30 P.M. This action packed night will be held at _____ starting with a whole group keynote and then smaller group break-out sessions in other areas of the buildings.

Parents will bring their children and after the keynote families will head to a k-2, 3-5 or 6-8 session. In the smaller sessions teachers will guide parents and students through various activities and then there will be about 20-25 minutes to practice the new strategies. We plan on sending home flyers and requesting reservations for the evening.

Each family will leave with a take home kit filed with resources and activities to follow-up with at home. In this kit there will be manipulatives, print materials, software demos and information about a companion website.

We do need teachers to help teach and facilitate that evening. There will be a call for volunteers and we hope to select two classroom teachers as well as a special education teacher from each building. Based on our numbers, we may also need others. The selected teachers will be paid for their preparation and required to attend a planning meeting with the even coordinator on Tuesday _____ from 3:30-4:30. We will serve as a guide and support as teachers plan activities for the evening.

Bad Bob's Bowling For Fractions

Skill: Adding Fractions

Objective: To help the players become familiar with the addition of like or unlike fractions.

Number of Players: Super small groups, or partners.

Materials: Small ball and an inexpensive set of bowling pins or ten empty paper towel tubes. Pins or tubes are labeled with a different fraction, using like or unlike fractions depending on the students' abilities. Pencil and recording sheet. Fraction bar manipulatives available for the students to use.

Play: Set up the pins; then have one student start by rolling the ball towards the pins. Have her record and add together the fractions from the knocked-down pins. Direct the other group members to check her sum. If correct, the player scores her sum for that frame. If the player adds incorrectly, she doesn't score.

Set up the pins for the next player. At the end of ten frames, have students total their scores to determine the winner. If desired, reprogram the pins to reinforce other important skills, such as adding decimals.

Aarr! Pirates Don't do Laundry!! Or do they??

Materials:

Index cards
Clothesline (or thick string)
Markers
Number cubes (dice)

Helpful Hints:

Hang the clothesline in a safe, secure location (against a wall is best.)
Place a few index card fractions (for example, $1/3$ and $2/4$) in the correct order on the clothesline to help start the activity.

Math Standards in Action:

Clothesline Fractions is an activity that allows students to explore the relationship among fractions. Using the clothesline as a number line, students compare and order numbers less than and greater than one. Specifically, students are recognizing, comparing and ordering fractions according to relative size.

Directions:

1. Roll two number cubes. Decide which number will be the numerator and which will be the denominator.
2. Use a marker to write the fraction on an index card.
3. Use a clothespin to hang the fraction card on the clothesline (which serves as a number line).
4. Take turns rolling number cubes, writing fractions, and hanging the cards on the number line.
5. Continue until each person has placed four cards.
6. Make sure the placement and spacing of the fraction cards are accurate and draw the number line in your math journal.

Questions Parents Can Ask:

- ❖ Which fraction has the greatest value?
- ❖ How do you know where to place the fraction card?
- ❖ How could you display equivalent fractions?

Challenge:

Try using four number cubes. Add two numbers to find the numerator and add two numbers to find the denominator.

Think about varying the game skill to include decimals, place value, etc.