



Central Valley Home School

Partnering with Parents,
Keeping it REAL

Math Mania

Playing games is a powerful strategy to teach Math. Games motivate, challenge and engage learners. While participating in math games, students learn to practice math skills, use academic language, develop sportsmanship, and experience math in a different and fun way. In this month's STEM Bin your student will receive a deck of cards and a pair of dice. Listed below you will find resources/links to learn how to use these everyday manipulatives to sneak in some learning fun.

[Math is Play - Tedx Talk](#) - What if every kid said math is play? In this interesting and engaging 13-minute video, educator Matthew Oldridge shares his thoughts on why when it comes to teaching young (and old) students math, fun and play should be at the core of it. Parents, this is worth your time to watch.

DICE GAMES

Pig: Mental Addition and Critical Thinking (Number Sense)

The goal of Pig is to be the first player to get to 100. The game is played with a pair of dice, and requires a paper and pencil for scoring.

1. The first player rolls the dice, calculates the sum (mentally), then rolls again if he or she wants to. The next sum is added to the first. The player can roll as often as s/he wants to before play goes to the next turn. However, ...
2. If a 1 comes up on one of the dice before the player decides to stop rolling, the player scores 0 for that round. The play goes to the next player.
3. Worse still, if a 1 comes up on both of the dice, the turn ends and the player's entire total falls to 0.

[Pig printable](#)

Follow up with a discussion about strategies used in Pig and how opponents need to be able to use mental math to check that the roller is playing fairly.

Array Arrangement: (Multiplication)

Using a pair of dice, the students are to draw the product on graph paper as a rectangular array. For example, if a 4 and a 3 are rolled, that means $4 \times 3 = 12$. The array is drawn as 4 rows and 3 columns, to make a rectangle. Each time a square number is drawn, let the students color it in red. Label each array with the number sentence it goes with.

[Array Arrangement video example](#)

[Graph paper](#)

For other great activities using dice to reinforce number sense, multiplication, fractions and more, click here [Scholastic Math Games Using Dice](#)

CARD GAMES

Place value card game: (Number Sense) found at <http://learningideasgradesk-8.blogspot.com/2012/04/fun-place-value-card-game-for-kids.html>

- Use all the cards numbered 2, 3, 4, 5, 6, 7, 8, and 9 (4 of each)
- Use the Aces as the number 1.
- If you want to use a zero (0), choose either the Jack, Queen or King as a ZERO.

Directions

- Shuffle the cards.
- Place the deck number-side down on a flat surface.
- Each player (at least 2) draws 3 cards from the top of the deck.
- Each player makes the largest 3-digit number possible.
- Players read aloud their numbers and compare their value.
- The player with the larger number wins all the cards in that round.
- The game is over when all of the cards in the deck have been used.
- The player with the most cards is the winner of the game.

Variation

Younger players can play with 2-digit numbers.

Fraction War: (Fractions) found at <https://www.superteacherworksheets.com/blog/math-games-you-can-play-wh-a-deck-of-cards>

You will need two pencils (not included), one for each player, to serve as the fraction line. This is how it works:

- Remove jokers, face cards, and aces from the deck. Split the deck evenly between two players, and make sure the cards are face down.
- Both players turn over the top two cards in their piles. The first card is the numerator; it goes above the pencil. The second card is the denominator; it goes below the pencil. The player who has the larger fraction gets to keep all four cards. (If the players turn over equivalent fractions, a "fraction war" ensues. This means a new round of cards is played, and whoever has the larger fraction in the new set of cards gets to keep all eight cards.)
- The player who acquires all the cards is the winner.

Even/Odd Speed Sorters: (Number sense) found at same sight credited above.

This is great for young children who are learning to recognize even and odd numbers. It's really simple! Here's how to play:

- After removing jokers, face cards, and aces, split the deck of cards in half and give one half to each player. (The cards should be face down.)
- The players flip their cards over, sorting them into piles of even and odd cards. The first player to sort his or her cards yells "Freeze!" The opponent stops sorting and checks the first player's piles to make sure there are no mistakes. If there are no mistakes, the first player wins.
- If the opponent finds any mistakes in the first player's even and odd piles, he or she gets to finish sorting. The first player checks the opponent's piles, and if there are no errors, the opponent wins.

Interested in more enriching games to extend your learning? We love this website and the 16 different card games it features. This link encompasses games for various ages and many different mathematical concepts.

https://www.weareteachers.com/math-card-games/#.XnDgB1Uu_NU.facebook

Have fun, math is play!