

Playing Cards to develop Numeracy Skills

Place value game

Deal 4 cards to each child. Children to write them into addition grid give a target e.g. nearest to 300, lowest answer, highest answer etc.

Rounding

Deal each child some cards depending on what you are working on (eg. If you are rounding just with 2 digit numbers they only need two cards. etc) Ask children to arrange the cards to make a number. Ask: What would you number be rounded to the nearest 10, 100, 1000?

Addition, Subtraction or Multiplication

Game for up to 4 players. Deal out whole pack. Children to turn over 2 cards at a time. Either add, subtract or times them together. Playing highest or lowest wins. If you win you keep the cards and put them to the bottom of your pack. (To make this harder they could use 3 cards and add them together or multiply the first two then multiply the answer by the third card.)

Addition, Subtraction or Multiplication

War: Played in 2's deal out pack children to turn over 1 card each either add or times cards together first to call out answer wins.

Positive and Negative Numbers

Integer War:

All the black cards are positive. All the red cards are negative. The Ace is equal to 1. The number cards are equal to their number value. (2=2, 3=3, etc.) The face cards are equal to 10. The entire deck is dealt to all the players. Players turn over their cards. The player whose cards have the highest value wins all the cards.

For example, if players had -2, -10, 3, and -8, the person who had the 3 card would win.

Addition in different combinations

I've Got 18! (You can change this number) Deal four cards to each player. The remaining cards make up the Draw pile, which should be in reach of both players. A Discard pile will form next to the Draw pile. Players try to find combinations of cards that add up to 18. The player who plays the most cards when he Draw pile runs out is the winner. Player 1 starts the game and looks for any combinations of 18 he or she has in her hand (e.g. 6+8+4, 9+9, 2+6+9+1, etc.). If she has a combination of 18, she then laces the combination of cards in front of her and adds to her hand from the Draw pile, so that she has four cards at the end of her turn. If she does not have a combination of 18, she takes one card from the Draw pile, and picks a card from her hand to throw into the Discard pile, leaving her with four cards in her hand. Player 2 then takes his turn, playing his cards in the same manner as Player 1. The game continues until the Draw pile is empty and neither player has a combination of 18 in their hands. Players get one point for each card in front of him or her (i.e. , a combination such as 1+5+9+3 is worth four points, but a combination of 9+9 is only worth two points). The player with the most points wins!

Multiplication Tables

Quick times (individual)

Deal or choose 2 cards. Multiply numbers together.

How many can you do in 1 minute, 2 minutes etc?

Odd and Even

Create a number using 1,2,3,4 cards sort into list of odd or even.

Place Value

Tens and Units (individual/paired)

Put 2 cards together to create a TU number.

Choose a third card

a) add to original TU number c) multiply to original TU number

b) subtract form original TU number d) divide into original TU number (What would the remainder be?)

Challenge: use 3 cards and make HTU number.

Then 4 cards to make ThHTU number

Playing Cards to develop Numeracy Skills

Know your number

Take out picture cards. Deal out cards to whole class. Each child looks at card.

Hold up card if you have:

- an even number • an odd number
- a multiple of 2, 3, 4, 5, 6, 7, 8, 9, 10
- a square number
- a square root
- a prime number
- a triangular number
- a factor of
- a fraction of
- Did you notice any numbers that were held up a lot?

All four rules

Reach 100 (TARGET) – option: calculator

Deal 5 cards face up on table eg. 2, 6, 8, 8, 5. Children move along the line selecting an

operation +, -, x, ÷. They need to get as close to 100 as possible.

Variation: use only number cards 1 – 5, 6 – 10, etc; target operations to be used, one, two three or all

Difference

Pyramid – up to four players; 6 cards face up; object to build a pyramid. ie. No duplicates – change if necessary.

A card is placed above and between cards if it represents the difference of or the sum of.

Complete the pyramid until stuck or you reach the top.

For more than 1 player, take it in turns to place card on pyramid. If a player can't go, return card to the bottom of pile. You do not need to go even when you can. When pyramid is complete, the winner is the player with the least amount of cards left.

Challenge: do not use every individual card. Use every second or third.

Triangle numbers

Give each child one suite.

Total the numbers (1+2), then (1+2+3) then (1+2+3+4) etc

Challenge – triangular numbers. Children to work out formula $n \times (n + 1)$

Percentages, Ratio and Proportion

What percentage of the pack is red?

Take one suit:

What is the ratio of picture cards to the rest of the suit? (3:10)

What is the proportion that is picture cards? 3:13?

Whole pack:

What is the ratio of picture cards to the rest of the pack?

What is the proportion of the pack that are picture cards?

Probability

(either within individual suits, red cards, black cards or whole pack)

Children to work out probability for:

- even numbers • red cards
 - black cards • individual cards (with suit)
 - a number, picture card
 - multiples of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 reasoning
 - suits Link work with fractions.
- Challenge: use jokers.

3 Times Table Club

Children to look closely at the clubs. How many bulbs are on each club, on each card?

Do not count the motif under the number. The three of clubs – 3 clubs with a total of nine bulbs – $3 \times 3 = 9$.

Ask the children to look at other numbers and discover the 3x table.

Challenge: use all motifs on card.

How many bulbs in total from cards 10 – 10?

3 6 9 12 15 18 21 24 27 30

Children to pair up systematically to make bonds to 10, 30 or whatever appropriate for ability. Use 3x table clubs in conjunction with other random cards to make multistage problems. ie. 3 clubs (3×3), 8 of diamonds, = 8.

2 times table (doubling)

Table of hearts

Looking at the suit of hearts, notice that there are 2 semi circles

Use the hearts to focus on the 2×2 table.

Use 'table of hearts' in the same way as the 3 times table club.

4 times table (double and double again)

Diamond Table

Four times table. A diamond has four sides.

Use as 'three times table club'.

Prime Numbers

Ace = 1, J = 11, Q = 12 and K = 13.

Children remove prime numbers from pack:

1, 2, 3, 5, 7, J, K.

Total of prime numbers – is it a prime number?

Which prime numbers, when added together, make a prime number?

Number Bonds

Deal one card – What is the cards pair to make 10? (Could change this into a game of pairs)

Deal two cards – What is the cards pair to make 100? (Can change this however you want.)

Ordering Numbers

Use cards 1 – 10 of one suit. Make 5 TU pairs. Order largest – smallest.