

Thirty-One

Topics: strategy, addition to thirty-one, thinking ahead, mental addition, counting on.

Materials: a deck of cards

Players: best for two

Recommended Grades: 2-8

Common Core Standards: MP1, MP2, MP3, MP5, MP7, MP8

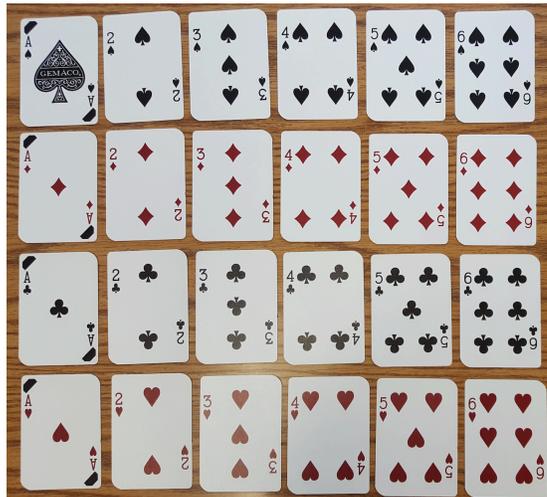
Be the player to flip over the card to make exactly thirty-one. Can you find a strategy to make that happen?

Why We Love Thirty-One

Thirty-One is a game that provides players with lots of choices and opportunities to experiment with different strategies for winning. Besides providing rich opportunity for addition, the focus on mental addition is a big plus. Thinking ahead to outthink the opponent will deepen strategic thinking skills and keep older kids engaged and challenged.

How to Play

Lay out the ace to six of each suit in a row, face up and not overlapping, one suit above another. You will have one column of four aces, a column of 4 twos, and so on – six columns in all.



The first player flips a card upside down and says its number value. Players alternate, each time turning down one card, mentally adding its value to the running total, and saying the new sum out loud. The player who exactly reaches thirty-one or who forces the next player to go over that sum, wins the game.

Questions

Some strategy questions to think about as you play:

- Is there an advantage to going first or letting your opponent do so?
- Is there an advantage to flipping either high cards or low cards first?
- Can you find a rule or strategy for winning every time?

Variations

1. For a shorter game, use only the ace to 4 of each suit. Play to a target sum of twenty-two.
2. Play Thirty-one with 2 or 3 suits of cards rather than 4. How does this change your strategy?
3. Play to a target number other than thirty-one. How does this change your strategy?
4. Allow players to use addition or subtraction on each turn. If no one hits thirty-one exactly, the game is a draw.
5. Come up with your own variation to this game.

Tips for Young Students

1. Younger children may need to use paper and pencil to record sums for the first few games. Model counting on out loud to add a new number to the running total on your turn.
2. Rather than flipping cards, place markers on chosen cards so the cards remain visible.

About this Game

Adapted from the book Math You Can Play by Denise Gaskins.