**“Card Trick Instructions” Activity**

* Students will not be graded on whether they get the trick to work.
* There are different tricks, so if someone else is doing something different from what you’re doing, it is okay.
* Designate a magician (good at shuffling) and a reader.
* The reader is to read the instructions to the magician. The reader isn’t supposed to let the magician read the instructions (although he can show any pictures to the magician) and the magician isn’t supposed to let the reader touch the cards.
* What did the reader do to help the magician? (For example: “slow down,” “read one step at a time and wait until the magician finished,” and “I asked her to repeat some steps”)
* Did you try the trick, fail, try again, and succeed? *This sometimes happens with math problems too.*
* How do you think you should read the textbook? Do you see a connection between following the instructions of a card trick and reading a math textbook?
* Were you motivated to complete the trick? How might you apply that kind of motivation to reading the textbook and completing your math assignments?

Face-Up/Face-Down Trick

1. Find four playing cards. They can be any four cards, all different or the four aces. It doesn’t matter.
2. Have a look at the bottom card of the packet. That’s your card and you have to remember it.
3. Next, the cards are going to be mixed by some simple instructions. Put the top card on the bottom of the packet.
4. Turn the current top card face-up and place it back on top.
5. Now, give the packet a cut. It doesn’t matter how many cards you cut from top to bottom: one, two, three, or four (which is the same as none).
6. Next, spread off the top two cards, keeping them together, and turn them over, placing them back on top.
7. Cut the cards at random again and then turn the top two over.
8. Give them another cut and turn two over.
9. Give them a final cut. This cutting and turning has mixed the cards in a random fashion. Remember the name of your card! We’re going to find it together.
10. Turn the top card over (if it’s face-down, turn it face-up; if it’s face-up, turn it face-down). Put this card on the bottom of the packet.
11. Put the current top card on the bottom of the packet without turning it over.
12. Finally, turn the top card over and place it back on top.
13. Now, we’re done. Name your card.
14. Spread out the packet of four. You’ll find three cards facing one way and your card facing the opposite way!

Last Three Cards Trick

1. Remove the Ace of Spades, the Ace of Hearts, and the Ace of Diamonds from the deck.
2. Shuffle the remaining cards.
3. Deal 10 cards into a pile face down.
4. Deal 15 cards into a second pile face down.
5. Deal 15 cards into a third pile face down. Use the remaining cards to make a fourth pile.
6. Place one of the removed aces face down on top of the first pile. Cut the second pile at any position and place those cards, still face down, on the first pile.
7. Place one of the remaining aces face down on the top of the second pile. Cut the third pile at any position and place those cards, still face down, on the second pile.
8. Place the remaining ace on the third pile. Put the fourth pile on top of the third pile, still face down.
9. Pick up the third pile and put it on top of the second pile, then pick up the entire second pile and put it on top of the first pile. You should now have all the cards in your hand, face down.
10. Take four cards off the top of the deck and place them on the bottom. All the cards should still be face down.
11. Deal the cards from the top of the deck alternately into two piles, one face up and the other face down. The top card goes into the face up pile, the second into the face down pile, the third into the face up pile, etc.
12. Put the face up cards aside. Pick up the face down pile and again deal the cards from the top of the deck alternately into two piles, the first one facing up and the second facing down.
13. Again, put the face up cards aside and deal the face down cards into two piles as before starting with face up.
14. Once more, put the face up cards aside and deal the face down cards into two piles as before starting with face up.
15. Turn over the face down pile. It should contain the Ace of Spades, the Ace of Hearts, and the Ace of Diamonds that we started with!

Four Stacks Trick

1. Shuffle the deck thoroughly.
2. Deal out nine cards in a row, face down. They can overlap a little bit.
3. Choose a card from these nine, look at it, and memorize it.
4. Assemble the nine cards into a stack face down, with the chosen card at the top.
5. Add this stack to the bottom of the deck.
6. Now deal cards one at a time from the top of the deck into a pile, face up, counting backward from 10 as you do so. If at some point the card’s rank matches the number said, then begin dealing into a new pile at that point, counting again backward from 10.

For example: If you said 10, 9, 8 and actually flip over an 8 as your third card, then immediately start a new pile.

1. If you reach 1 without a match occurring, then “close” that pile by dealing a face-down card onto it, and start a new pile.
2. Keep this up until you’ve created four piles.
3. Now add the values of any face-up cards on top of the piles.
4. Deal out that many cards in a pile face down, flipping over the final card. (However, if the sum you calculated in the previous step was zero, then just flip over the last card you dealt.)
5. You have found your chosen card!

Four Cards Trick

1. Shuffle the deck thoroughly.
2. Choose a card at random.
3. Memorize your chosen card and put it on the bottom of the deck.
4. Deal out 12 cards in a row, face down. They can overlap a little bit.
5. Select four cards from these 12, turn them face up on the table
6. Assemble the remaining eight cards into a stack face down.
7. Add this stack to the bottom of the deck. There should be four face-up cards in front of you.
8. Next to each face-up card, count the rest of the way to 10 by dealing cards face down in a pile.

For example: If you see a 7 then deal 3 cards face down next to it, since 7 + 3 = 10.

Note: Jacks, queens, and kings are equal to 10, and aces are equal to one. If the face-up card is already worth 10 then just move on to the next face-up card.

1. Put together all the face-down cards that you just dealt out, and assemble them into one stack face down.
2. Place this stack on the bottom of the deck.
3. Add up the values of the four face-up cards.
4. Deal out that many cards in a pile face down, flipping over the final card.
5. You’ve found your chosen card!