

How likely is it lesson plan:

Bell Work:

Ask students to write down what they know about Probability.

- 1) Initiation: **World Series of Poker audio w/ PowerPoint slide**
- 2) Ask students to think of words that describe the probabilities listed in the video, and then verbalize them
 - a. Continuum- talk about words between Never and Always and synonyms for Never and Always- call on students/groups
 - b. Ask students probabilities about things they may know (cancer with smoking, surviving cancer, snowing in January, raining in spring, etc) and ask them to think of words that may describe those events
- 3) Explain characteristics a deck of cards
- 4) 13 plus
 - a. **Model for students-** explain chart and “arrange” the deck for the 8 vs. 2 game
 - i. 10 vs. 2 game: For the player who has 10: What is the probability that you will win on the next turn? What is the sample space (the cards left in the deck to choose from?) What cards will help you win? What cards wont help you win? (complementary probability)
 - ii. Ask students to calculate the probability that the player with the 2 card will win.
 - iii. On second turn the 10 gets a 2 and the 2 gets a 6. (Focus on filling out the chart)
 - b. **PowerPoint example-** 6 vs. 3
 - i. On the second turn, 6 gets a 5 and the 3 gets a 2
 - ii. On the third turn, the 6 and 5 get Jack and the 3 and 2 get a 2
 - iii. Review chart and probabilities with students
 - c. **Students play** 3 games and fill out the worksheet- Check point is for insuring students are filling out the table correctly and that the calculations of probability are correct
- 5) Closure: **exit slip**

Bell work for next day: Bring back the language continuum

- 1) Talk about probability as a number equal to or between 0 and 1
- 2) Ask students examples of probabilities that they got in the 21 game and ask them where on the continuum [of never to always/ (0 to 1)] they would put that probability

Name: _____ Date _____ Period _____
 Partner's Name: _____

HOW LIKELY IS IT?

Game: 13 Plus

Play the game 3 times, recording your results and calculating the probabilities. The teacher will come around and do a "Checkpoint" with you and your partner.

Rules:

- the player that gets to 13 or over first, wins
- each player receives a card on each turn
- if both players go over 13 in the same turn, it is a tie
- Aces are 1 or 11 (player's choice); face cards are 10; all other cards are their numerical value

LET'S PLAY AS A CLASS! WATCH THE POWERPOINT AND RECORD THE INFORMATION!

CLASS GAME:	Your card	Total	What's the probability (<i>How likely is it?</i>) that you will get to 13 or more on your next turn? (leave in fraction form) ($\frac{\text{number of cards that will help you}}{\text{total number of cards remaining in the deck}}$)	Who is more likely to win? You or your opponent?
Turn 1				
Turn 2				
Turn 3				
Turn 4				

YOUR TURN!!!

GAME 1:	Your card	Total	What's the probability (<i>How likely is it?</i>) that you will get to 13 or more on your next turn? (leave in fraction form) ($\frac{\text{number of cards that will help you}}{\text{total number of cards remaining in the deck}}$)	Who is more likely to win? You or your opponent?
Turn 1				
Turn 2				
Turn 3				
Turn 4				



Checkpoint: Raise your hand and wait for a teacher

GAME 2:	Your card	Total	What's the probability (<i>How likely is it?</i>) that you will get to 13 or more on your next turn? (leave in fraction form) ($\frac{\text{number of cards that will help you}}{\text{total number of cards remaining in the deck}}$)	Who is more likely to win? You or your opponent?
Turn 1				
Turn 2				
Turn 3				
Turn 4				

GAME 3:	Your card	Total	What's the probability (<i>How likely is it?</i>) that you will get to 13 or more on your next turn? (leave in fraction form) ($\frac{\text{number of cards that will help you}}{\text{total number of cards remaining in the deck}}$)	Who is more likely to win? You or your opponent?
Turn 1				
Turn 2				
Turn 3				
Turn 4				