APL (Active Playful Learning) Learning Experience Title: Four Corners Probability

Grade Level or Course	4th Grade		
Quarter # Unit #: Unit Title	Quarter 2, Unit 3: Fraction Number Sense		
Featured APL Practice:	Small & Paired Groups 	Student Contributions 	Hands-on & Minds-on 
	Voice & Choice 	Meaningful Connections 	Enthusiasm & Positivity 
APL Summary • **Briefly describe connection between lesson and APL practice**	Students will play a probability game using a deck of cards. Through the Kagan cooperative structure Four Corners, students will have opportunities to explain their thinking to classmates, thereby enhancing communication skills while making learning active and social. Students will also collaborate with classmates to design models to illustrate different likelihood outcomes.		
Materials / Resources	Sets of playing cards (1 per group of 2-4 students) Playing cards 4 suits signs		
Math Standards	**Math SOLs** (*write out the whole SOL*): **4.PS.2** The student will model and determine the probability of an outcome of a simple event. a) Describe probability as the degree of likelihood of an outcome occurring using terms such as impossible, unlikely, equally likely, likely, and certain. e) Create a model or contextual problem to represent a given probability.		
Learning Objective(s)	I can… • Describe the probability of an outcome • Make predictions based on probability • Create a model to represent likelihood		
Learning Experience Sequence • Follows Math Workshop Sequence • Teacher-facing language • Describe elements of the learning experience here, within the model of Math Workshop • Student and Teacher Actions: What should students be doing? What should teachers be doing?	**Before the activity, hang one of the four suits signs in each corner of the classroom.**  Activate prior knowledge: Show students the deck of cards and invite them to share what they know about the cards.  Introduce Game: ○ Remove the 2,3, and 4 cards from the deck to use for today's game. That is, play with 12 cards: the 2, 3, and 4 of each suit; (Option to use 8 cards- 2 per suit- to shorten the game) ○ Explain that the teacher will flip one card at a time. Before that, students should move to the corner of the suit that they predict will be on the flipped card. • Round 1: Play the game without any discussion. • Round 2: Play again with the following modifications:		

- This time, make a table on the board that lists the cards by suit. ***As cards are drawn, cross them off the list.***

Hearts	Diamonds	Spades	Clubs
2	2	2	2
3	3	3	3
4	4	4	4

- When students choose a corner, pause so that they can discuss their thinking with classmates in the same corner. Have 1 student in each corner share the group's logic before flipping a card. (Option for students to switch corners after hearing classmates' thinking)
- As students share their strategies, introduce probability vocabulary: ***impossible, unlikely, equally likely, likely, and certain.*** Connect the terms to the table.

 Small group task: (Can be used on a different day if time is running low) Working with a partner or small group, students use a deck of cards to create scenarios to show outcomes that are :

- Impossible
- Unlikely
- Equally likely
- Likely
- Certain
- (EX: 6 hearts cards exemplify a *certain* outcome of hearts)

Reflection (Resources):
Verbally or in writing (math journal or exit ticket), students respond to the prompt:

- When you played the Four Corners card game, what strategies did you use?
- DId you change your strategy while playing? Why or why not?
- What strategies will you use next time you play?

Scaffolding and Supports

- Differentiation
- Scaffolding
- Remediation
- Extension
- EL Scaffolds (Elem)
- EL Scaffolds (Sec)
- QTEL Strategies (Elem)
- QTEL Strategies (Sec)

Grade-level teams and specialists collaborate to devise scaffolds and supports based on students' needs.

- Play the Four Corners game throughout the unit with various manipulatives (spinners, dice, coins, etc)
- Play the game as above and introduce writing probabilities as fractions.
- Have a class discussion about the difference between theoretical probability and actual outcomes