Essential Question: How can events like Family Game Night and Parent Academy Night help establish positive relationships between parents, students, and school personal; while also helping to increase students' positive dispositions and perceptions of mathematics?

Math Game Nights:

• Choosing Games

- Discuss with peers which skills, concepts, or strategies your students need to practice
- Pick 5 quality games that include concepts, fact fluency, and specific strategies.
 - Games should cover a wide variety of concepts
 - Choose a few games the kids already know and some to learn with their parents.
- Games should be played in 10 minutes or less
- Games that can be played with any number of players are best
- Games can be differentiated based on ability
- What we noticed:
 - Students are naturally attracted to games which they are familiar; you may have to suggest that they try a new game.

• Preparation

- Type, print, translate, and laminate the directions.
- Place 5 copies of each game and all the materials in a labeled plastic baggie
- Get buy-in: advertise with posters, on the list-serve, at PTA nights
- o If desired, post games on the internet to download or have copies available
- Determine if you will provide games or activities for young children (such as a math book-nook or pattern blocks)

• On Game Night

- Have students sign in by creating a line-plot by homeroom or grade level.
- Keep grade band games together allowing for students to play leveled games
- Place a sign by each game
- Lay out all of the materials
- If interested in specific game feedback, leave a recording sheet that says "I liked it, I did not like it, I have no opinion"
- Let students play any game they choose. They can experience success or try challenging themselves. Some students may need scaffolding to try a harder game.
- Get the parents playing! Invite them to play if they are just watching.
- Model for parents how to ask about their child's process and reasoning, "How did you find 6 x 7?" The parent can see how just how flexible or inflexible a child's thinking is and how important it is discuss why or how they solved the problem.
- Model how to assist a struggling student. For example, if the child can't remember what 6 x7 is, you can remind them of a strategy you have already discussed, such as "I know you remember what 6 x 5 (5 groups of 6). How can we use this knowledge to get to 6 x 7 or 7 groups of 5.

• Special Notes

- $\circ~$ The lower the grade the more parents in attendance; have more games for the lower grades.
- If running a school-wide event is daunting, pick a grade or grade band to focus on

Parent Academy Nights:

• What Are They?

- Mini-course offerings to parents on content, concept, skills, and/or resources
- Consists of 2 or more 25 minute sessions
- o Teachers offer the same course for each session

Getting Started

- Pick a focus –grade band, subject(s), strategies
- Brainstorm: Is there one strand students struggle with more than others? What concepts or skills do students/parents always need assistance with?

Course offerings

- Offer a variety of courses for both grade and content diversity
 - Fact fluency K-2 looks different than Fact Fluency 3-5
- Allow partnerships
- Integrate technology
- Get hands-on
- Educate on "new strategies," mathematical discourse, higher-level questioning, and resources parents may not know exist.
 - Example Courses:
 - Fun with Fractions
 - Partial Quotients
 - The Music in Multiplication (learning math facts through music)
 - Music, Math, and Motion (Phys. Ed. Teachers modeled how they integrated math into everyday games and how parents could do the same at home)
 - This Isn't Your Mother's Long Division
 - Reading in Math? No Problem!

Logistics

- Each session should have a hand-out to help parents implement their new skill or content knowledge at home
- o Get translators for the day of and translations of each hand-out
- Record the session and upload online (if desired)
- Publicize PTA Meeting, listserv, flyers

On Parent Academy Night

- Meet in the auditorium to explain the structure and purpose of the event
- Hand out programs including title, teacher name, description, grade band, and room number
- Have volunteers direct people
- Hand out a survey at the end of the 2nd session or use a QR code for parents to take a survey online to garner feedback.

Conclusion:

- PAN and MGN help educate parents and provide them with the tools necessary to effectively assist their children at home.
- PAN and MGN create student and parent positive dispositions around mathematics.
- By observing teachers in action, parents gain respect for teachers and their profession as a whole. Parents begin to see us as the experts we are as we utilize our knowledge and knowhow to assist them.
- Parents begin to see the educational journey as a collaboration between parent, teacher, child, and school; thus creating an open dialogue more likely to result in student gains.