Partners, Games, and Links

- Hayden: Fab-A-Diffy
- Thomas: Contig 60
- Kevin: Interview
- Noah: Editing
- Tyler: Interview & editing
- Kevin & Thomas: Stars and Bars
- Myles: Queens and Guards
- Kamryn: Juggle
- Kate: Interview, research, and setting up slides

Links:

Mathematics Pentathlon Website:
https://www.mathpentath.org/game-description-division-3/

Mathematics Pentathlon Game Rules:
https://www.mathpentath.org/wp-content/uploads/2018/04/Highlights-Division-3.pdf

Juggle

Juggle is a strategy game with the elements of problem solving, chance, and strategy. Juggle teaches students about using strategy, solving roadblocks in math and problems Juggle uses 'polyominoes' game pieces - colored pieces made up of squares. I feel like this game embraces a competitive spirit while also helping kids with working as a team, strategizing, and working around problems. This helps strengthen students addition, subtraction, and division skills.

How to play Juggle:

Player(s) get into equal teams to start. Go into stacks or a 'bank' beside the two game boards. Players will roll a dice to see who goes first. The player that gets the lowest score goes first. During a turn a player will roll *both* dice. For example if a player rolls three and a two they can either grab the Polyominoe for a two and a three or add, subtract, or divide. Players will continue until one player has the whole board filled up with no matching polyominoes touching.

Stars & Bars

Stars and Bars is very fun. It helps with strategy because you have to find out how to make the most points. You and someone else get the card deck and shuffle it. Then you draw 4 cards and place them in the middle in the middle. Then whoever draws a starred card first gets to go first. Then you begin placing cards on the board and depending if the card is bordering another card and what way it is bordering it you will get different amounts of points. Then to win you have to get 200 points and subtract your score from your opponents and must be at least 15 points ahead.

Fab-a-Diffy

Fab-A-Diffy is a fraction game. You need 2 players, no more, no less. First someone draws a strip, then the other person does the same, and they try to make a subtraction sentence or an addition sentence. If you can't make one, you put it in the show box. Then, you draw again and try to get a full number sentence. You play until the board is full. Then you count, and the one with the most number sentences WINS!!!!

Example: 1 half minus 1 fourth = 2 eighths.

Contig 60

Contig 60 is pretty simple.You roll 3 dice and take the numbers and make a number sentence and the answer is what number you put a chip on. Then you keep doing that trying to make the right number sentence and get 5 chips in a row going across, diagonal, or vertical.

Queens & Guards

The Mathematical Pentathlon game, Queens and Guards, is a game that teaches and encourages spatial thinking - spatial thinking is thinking that finds meaning in the shape, size, orientation, location, direction or trajectory, of objects. It has 'queens' (pawns), and 'Guards' (chips) as playing characters. **The goal of Queens and Guards** is the player must be the first to position the Queen on the center hexagon, a sunflower, and have it completely surrounded by the same player's 6 Guards. **To start the game**, the monitor puts a chip of one color in one hand and chip of a different color in another. Ask one player to determine what the starting color will be and ask the other player to pick a hand. Player who has starting color receives the flag card, and the game begins.

Queens & Guards

The player's turn starts when they receive the flag card - the flag card will be passed to the next player, also ending the previous player's turn **The setup for the game** is not that complicated - The red and blue crowns represent the starting point for the corresponding Queen. The red and blue flowers represent, like the queen, the starting point for the corresponding color of Guard. The **Queen and Guard movement** is simple too, as the current playing piece - either Guard or Queen - can only move to one adjacent honeycomb-shaped space. Only a Queen can occupy Queen starting spaces or 'thrones' (the middle honeycomb space with a sunflower decal).

Queens & Guards

In Queens and Guards, there are also traps. **Traps occur** when a Guard or Queen of one color is positioned in between two Guards of the other color in a straight line. If a trap doesn't occur in a line, it's not a trap. **When a Guard is caught in a trap**, the Guard must move back one space. **If a Queen is caught in a trap**, the Queen must move back to the crown-embossed starting hexagon. If a trap occurs and a Guard cannot move backwards because another Guard is blocking the way, the player must just ignore the Guard. **A tie occurs** when six Guards of one color surround the center honeycomb, but there is no Queen in the middle.

Kate Carson's Interview

Thank you Wimberley Education Foundation for gladly providing the money to make this possible. These games make us think strategically and encourage us to learn new math skills. We are developing the spirit of sportsmanship, strategies, and new ways to problem solve. We appreciate your generosity and giving us the opportunity to explore the unknown.

Kevin Alvarado's Interview

Thank you to Wimberley Education Foundation for helping us make this possible. I worked on Stars and Bars and I think it is a really fun board game and helps students develop multi variable relationships and algebraic relations. It is a really fun and strategic game. The way you score points is that you compare the cards by how much cards are in its area.   A certain area counts for certain points etc.

We really appreciate Wimberley Education Foundation for making this possible!

Tyler Kruzie's Interview

I think the mathematical pentathlon is a great way to bond together in a fun but educational way. My favorite game is Stars & Bars, the game consists of strategy and skill of adding mainly. My second favorite game would definitely be Contig 60. In Contig 60, you have to have experience in solving number problems. Thank you for the grant, Wimberley Education Foundation, we really appreciate you!

Thank you

Wimberley Education Foundation

5th Grade Students and Teachers