guthrie green

6-8 Math
Show Me What You Know!

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Overall Goal for the Lesson:
Students will demonstrate proficiency in a range of 6-8th grade level math concepts.

Description of Setting, Grade Level, and Students:
This activity can be used for students in grades 6-8, any class size. The activity is for varying performance levels, remedial, average, or advanced. Guthrie Green is in an urban setting with access to water, shade, restrooms, and electricity.

Student Objectives for the Lesson:
Students will review math concepts in a fun, engaging way. Most of the cards are 5th-7th grade level math. You can remove or create your own cards as needed, depending on where you are in the year. A few of the cards work on reading skills, or are fun Brady Arts/Tulsa questions.

Length of Lesson:
This project should take 60-90 minutes (one class period)

Schedule of Lessons:
1. Preparation: You will need to make a board.
    a. It is easiest to model the board after candy land, dividing the board into squares. Any colors for the squares will work. Feel free to add in the Arkansas River on the side and the Guthrie Green as the starting point. Any creative and personalized touches make the game more fun.
    b. Every few 5 or 6 squares write the word SHOWDOWN.
    c. You will also need a dice.
    d. Have students design their own pieces for the game. They can fold index cards into standing triangles. Then they drew an image from the district on the front of the card. Be creative when choosing game pieces. For example, Woody Guthrie guitar, ONEOK field baseball, Tulsa Glassblowing art, Brady Theatre microphone, Chimera coffee cup, etc.
2. Directions:
    a. All players start at Guthrie Green.
    b. In order to move forward, you must roll the dice. In order to roll the dice, you must answer a question correct.
    c. First player picks a card. If s/he answers correctly, s/he rolls the dice and moves forward. To maximize learning, have all students respond to all of the questions in their notebooks, even though only the player whose turn it is needs to get it right.
    d. If a player rolls a 6, s/he draws a chance card and must follow the directions on the card.
    e. If a player lands on a "showdown" spot, s/he may choose another player to showdown (alternatively, s/he could showdown with the player to his or her right, or the player closest to him on the board).

f. During a showdown, the Teacher calls out a multiplication problem. Each player gets one guess. The player to call out the right answer fastest wins the showdown. If a player answers the wrong answer, his opponent has one chance to get it right. The winner of the showdown moves forward 2 squares.

g. First one to finish wins!

Common Core Standards Addressed:

CCSS.Math.Content.6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.

CCSS.Math.Content.6.NS.C.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.

CCSS.Math.Content.6.EE.A.2 Write, read, and evaluate expressions in which letters stand for numbers.

CCSS.Math.Content.6.EE.B.8 Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

CCSS.Math.Content.6.G.A.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

CCSS.Math.Content.7.RP.A.3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.

CCSS.Math.Content.7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

CCSS.Math.Content.7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.[1]

CCSS.Math.Content.7.EE.B.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically.

CCSS.Math.Content.7.G.B.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

CCSS.Math.Content.7.G.B.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

CCSS.Math.Content.7.SP.A.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

Assessment:
Students will be assessed based on participation and responses to challenge questions.

Accommodations:
Students may work in groups of as little as 2 people. Materials may be modified according to need.

Materials Needed:
Game Board
Dice
Game Pieces (index cards)
Chance Cards
Challenge Cards
Showdown Multiplication Problems

Brady Arts District Math Review Game

Directions:

1. All players start at Guthrie Green.
2. In order to move forward, you must roll the dice. In order to roll the dice, you must answer a question correct.
3. First player picks a card. If s/he answers correctly, s/he rolls the dice and moves forward. To maximize learning, have all students respond to all of the questions in their notebooks, even though only the player whose turn it is needs to get it right.
4. If a player rolls a 6, s/he draws a chance card and must follow the directions on the card.
5. If a player lands on a "showdown" spot, s/he may choose another player to showdown (alternatively, s/he could showdown with the player to his or her right, or the player closest to him on the board).
6. During a showdown, the Teacher calls out a multiplication problem. Each player gets one guess. The player to call out the right answer fastest wins the showdown. If a player answers the wrong answer, his opponent has one chance to get it right. The winner of the showdown moves forward 2 squares.

First one to the finish wins!

Chance cards:

You accidentally forgot cash on Food Truck Wednesday. Go back four squares.	You win an art auction. Move forward 2.	You make plans to meet a friend at Guthrie Green. Move to the same spot as him/her on the board.
You scored tickets to a concert at Cain's Ballroom. Move forward 2.	You're not flexible enough for yoga and get stuck in a pose. Wait for help for 1 turn.	Your favorite band is late to their venue. Lose a turn.

You lose your bag while playing on the splash pad. Move backward 2 as you search for it.	You remembered all the words to "This Land if Your Land". Jump ahead 5 spots!	You stop to get a delicious chocolate at Glacier Confection. Lose one turn.
The Drillers are losing! Roll the dice to find out how many runs they're behind. Move backwards the number you get!	The Drillers score a home run. You're one step closer to winning! Move forward 1.	The Drillers win! Move forward 3.
There's a line to eat at Spaghetti Warehouse. Lose 1 turn while you wait.	Oh no! Only one seat left at Cain's! Move forward to the next showdown spot and duel an opponent of your choice.	You go to The Tavern for dinner! Move forward 2.
Theatre Tulsa wants you to audition! Choose a question from the *Tulsa* pile. If you get it right, you get the part! If you get it wrong, you go back to Guthrie Green.	Your painting gets chosen to be displayed at The Philbrook Museum. Move forward 3.	Your artwork got shattered at Tulsa Glassblowing! Move back 2 while you repair it.
Showdown time! Choose any player on the board to showdown. If you win, you get to switch places with them on the board.	You fall asleep at Guthrie Green under a shady tree. Lose a turn.	Channel 6 chooses to interview you for a story. Pick another player to make move back 2 spots.

Below are the Review Questions

There are 175 people entered to win tickets to a Tulsa Drillers game. What percent chance do you have of getting picked?	18 businesses in the Brady Arts District serve food. There are 60 businesses. What percent of businesses serve food?	There are 175 girls eligible for VIP tickets at Cain's Ballroom. What is the probability that you get picked?
Oklahoma is located in the United States. What continent is it on?	Glacier Confection creates **edible arrangements**. What does edible mean?	The Brady Arts District is a giant rectangle. It is 6 blocks long and 7 blocks wide. How much space is inside the district for you to enjoy?
You find 125 cups of coffee at Gypsy Coffee House. There are 2 sugars in each. How many sugars are there total?	Woody Guthrie was 3 times older than the age he was married when he died. He was married at 18. How old was Woody Guthrie when he died?	ONEOK field is a circle with a 0.3 mile radius. What is the area of the field?
Your friends want to rent out the Brady Theatre for a party. The rental costs $1,350. Each person can only give $3. How many people do you need?	Chrysalis Salon & Spa dyes your hair fuchsia. What color is fuchsia closest to?	You wants to know how high a tree in the park is. You drill a 5 foot stake in the ground How tall is the tree? (picture required—similarity)
Oklahoma became a state in 1907. When was the **centennial**?	At Lucky's on the Green, potato chips cost $23 a chip. How many chips do you get if you spend $1,104.	You blow up 1/2 of the fireworks after the Drillers game. There are 14 sets of fireworks. How much is left?

You share an order of Spaghetti at Spaghetti Warehouse. You eat 1/3 and your friend eats 2/5. How much of the spaghetti is left over?	You can't find Guthrie Green! Name the four directions on a compass to move forward.	You have to walk 5.3 blocks. You already walked 1.2. How much further do you have to go?
You share a "yumlada" at The Rusty Crane. You eat 2/3 and your partner eats 1/8. How much of the "yumlada" did you eat altogether?	The mosquitos are **vicious** at Guthrie Green in the summertime. Define **vicious**.	You find a triangular piece of fabric to use for a craft at Zarrow. It is 10 inches high and has a base of 5 inches. How many square inches of fabric are there?
75% of the patrons at Guthrie Green come to see the live music. There are 2,300 patrons. How many watch the live music?	You get to pick out of a hat to see who has to wait in line for seats at a concert. There are 24 friends. What is the probability you have to wait?	It is -35 degrees at night. By noon, it is 63 degrees. How much did the temperature change?
Someone painted this on a building: < If you paint this: > is it reflection, translation, tessellation or rotation?	Each steak at Prhyme Steakhouse weighs 2.3 pounds. There are 16 ounces in a pound. How many ounces are in a steak?	A kid climbs a tree that is 108 feet tall. There are 12 inches in a 1 foot. How many inches high is the tree?

You use 3 of the 18 tickets you purchased for the Drillers game. What percent of the tickets did you NOT use?	"This Land is Your Land" is America's **unofficial** national anthem. What is the meaning of **unofficial**?	Glacier Confection sends you a candy bar that is 10 centimeters long, and 12 centimeters wide. How big is the candy bar?
You park in 2 hour parking for 4 times longer than you should. How long were you parked? a. 2 hours b. 4 hours c. 6 hours d. 8 hours	Your dinner bill at Blu was $124. If you want to tip your waitress 20%, how much money will you have to leave?	Woody Guthrie said, "Life's pretty tough… you're lucky if you live through it." What is the **irony**?
Tate Brady could run 5 miles in 44 minutes. How long did it take him to run 1 mile?	Tulsa is the second largest city in Oklahoma. What is the largest?	You can't decide what dish to get at Caz's Chowhouse! There are 57 choices to pick from. What is the probability you picks one of the 4 dishes with chicken?
The Center of the Universe has a diameter of 5 feet. What is the circumference of the pin?	The plants circling the center of the universe are each 12 feet from the center? What is the circumference of the center of the universe?	There are 50 states and 4 states touch the Arkansas river. What percentage of states touch the Arkansas river?
Channel 6 asks you a question during an interview. Which is grammatically correct? A. How many people are there? B. How much people are there?	Mocha Butterfly Boutique sews 1,234 jewels onto a special dress. Each jewel weighs .1 pounds. How much does the dress weigh?	The Creek word "Tallassi" means "Old Town" What city do you think was named after the word "Tallassi" ?

Glass melts at 2700 degrees Fahrenheit. If the oven is currently 640 degrees, how many more degrees does Tulsa Glassblowing's oven need to be to create art?	Woody Guthrie can run 2 miles in 13 minutes. How many miles can he run in 45 minutes?	Woody Guthrie is from Okemah, Oklahoma. Is this: A. a simile B. alliteration C. a metaphor D. symbolism
Woody Guthrie hold his guitar at a 75 degree angle. Is that acute, obtuse, or right?	You want to make sure you get enough calories every day while in the district. There are 670 calories in 1 meal. How many calories are in 4 meals?	You eat 3 orders of chips and salsa at Mexicali, which are 108 calories total. How many calories are in 1 order of chips and salsa?
Taxes in Tulsa are 7%. If a business owner earns $145,000 a year, how much does he/she have to pay in taxes each year?	Here are the ages of teens at Guthrie Green: 12, 14, 18, 18, 16, 16, 17, 18, 16, 18, 18, 18, 16, 15, 13, 13, 14, 15, 13, 17, 18, 18, 16 Find the average age.	Here are the ages of teens at Guthrie Green: 12, 14, 18, 18, 16, 16, 17, 18, 16, 18, 18, 18, 16, 15, 13, 13, 14, 15, 13, 17, 18, 18, 16 Find the median age.
Billy spends 6 days in the park, Chelsea and Kim 16, Rosa 7, Jonathan 13 and Greg 14. Find the average days that the final 6 stayed.	Each restaurant has 4 different types of bread. There are 12 restaurants. How many different types of bread are there total?	Here are the ages of teens at Guthrie Green: 12, 14, 18, 18, 16, 16, 17, 18, 16, 18, 18, 18, 16, 15, 13, 13, 14, 15, 13, 17, 18, 18, 16 Find the mode age.
You get a peanut butter sandwich at Chimera. Is a nut: A. Dairy B. Protein C. Vegetables D. Fruit	A pizza from Hey Mambo has a diameter of 12 inches. What is the circumference?	Grass grows at a rate of 0.5 centimeters per day. How much grass will there be in Guthrie Green after 16 days?

Woody Guthrie was Born in 1912. Oklahoma became a state in 1907. How old was Oklahoma when Woody Guthrie was born?	The number of people in the park is 3 times the number of tables left. Write an equation for this using *n* for people and *t* for tables.	The number of people in the park is 3 times the number of tables left. T = 3n If there are 15 tables left, how many people are there?

Dinner at Hey Mambo costs $240. There is a 5% sales tax. What is your final bill?	There are two square fountains in the park. One is 5ft x 10ft and the second one is 10ft x 3ft. Which one has a bigger area? How much bigger is it?	It costs $12 for a ticket to see the Tulsa Drillers win a game. If a family of 5 wants to go, how much do they owe?
You need to eat 2,000 calories a day in order to not lose weight. If you plan on eating 4 meals a day, how many calories should be in each meal?	You walk 15 minutes on the first day at Guthrie Green and 12 minutes on the second day. How many minutes did you walk altogether?	You walk 26 minutes on the first day at Guthrie Green and 18 minutes on the second day. How many minutes did you walk altogether?
You walk 1 hour on the first day at the park and 24 minutes on the second day. How much longer did you walk on the second day?	You walk 1/8 of a mile on the first day at the park and 2/3 of a mile on the second day. How much further do you walk on the second day?	What river runs along Riverside? A. Illinois B. Kansas C. Arkansas D. Missouri
You ate 10/2 burritos at Mexicali. What is that as a mixed number?	Lucky's on the Green charges $2.00 for a loaf of bread. There is a 7% sales tax. How much does a loaf cost altogether?	Laffa sells sandwiches for $5.00. If you want to tip your waitress 20%, how much money will you have to leave?