2024-2025 G & T- Grade 2-Math

Content Area: **Gifted and Talented**
Course(s):
Time Period: **Full Year**
Length: **9 Weeks**
Status: **Published**

Mathematics

Unit Rationale

Students have many questions and are curious about many things. One way to gather data is to ask people what they think about a topic. Students need to learn an effective way to gather the input from many people. This is why they need to learn how to create a survey and record the results of a survey.

Students also need to know how to represent data in a way that is easy to understand and that is easy for others to understand. Also, a graph can help students see relationships among the data they collect.

Standards

MATH.K-12.1	Make sense of problems and persevere in solving them
MATH.K-12.3	Construct viable arguments and critique the reasoning of others
MATH.K-12.4	Model with mathematics
MATH.K-12.5	Use appropriate tools strategically
MATH.K-12.6	Attend to precision
MATH.K-12.7	Look for and make use of structure
MATH.K-12.8	Look for and express regularity in repeated reasoning
CRP.K-12.CRP1.1	Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.
CRP.K-12.CRP2.1	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.
CRP.K-12.CRP4.1	Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready

	individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.
CRP.K-12.CRP5.1	Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.
CRP.K-12.CRP6.1	Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.
CRP.K-12.CRP7.1	Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.
CRP.K-12.CRP11.1	Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.
GIFT.PK-12.1.1	Self-Understanding. Students with gifts and talents demonstrate self-knowledge with respect to their interests, strengths, identities, and needs in socio-emotional development and in intellectual, academic, creative, leadership, and artistic domains.
GIFT.PK-12.1.1.1	Educators engage students with gifts and talents in identifying interests, strengths, and gifts.
GIFT.PK-12.1.2	Self-Understanding. Students with gifts and talents possess a developmentally appropriate understanding of how they learn and grow; they recognize the influences of their beliefs, traditions, and values on their learning and behavior.
GIFT.PK-12.1.3	Self-Understanding. Students with gifts and talents demonstrate understanding of and respect for similarities and differences between themselves and their peer group and others in the general population.
GIFT.PK-12.1.8	Cognitive and Affective Growth. Students with gifts and talents identify future career goals that match their talents and abilities and resources needed to meet those goals (e.g., higher education opportunities, mentors, financial support).
GIFT.PK-12.2.2	Identification. Each student reveals his or her exceptionalities or potential through assessment evidence so that appropriate instructional accommodations and modifications can be provided.
GIFT.PK-12.5.1	Variety of Programming. Students with gifts and talents participate in a variety of evidence-based programming options that enhance performance in cognitive and affective areas.

Essential Questions

How can we collect data from a large group of people?

How can we use data to help us understand questions we may have?

Pre-Assessments

Students must earn an Into Math Growth Measure score of 281 or higher.

Students must have earned an "E " in mathematics on their final 1st grade report card.

Instructional Plan

Each lesson will start with warm-up activities to help students develop and improve lateral thinking skills.

The main project for second grade is to survey the entire school using Google Forms to collect data and Google Sheets to create graphs to present the data.

Students will participate in activities each week involving surveys and graphing skills.

Students will also explore probability through engaging math games and activities.

Lesson (Math G&T - Week 1) Approx. 60 minutes

Student Learning Intentions or We are learning to … (WALT

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT collect data to answer questions about different topics.

3) WALT use tally charts to represent data.

4) WALT create a bar graph to represent data.

Student Success Criteria …

For Warm-up Activities including Breakout EDU: (15-20 minutes)

I can stretch my thinking to help me solve math puzzles and logic puzzles.

For Lesson 1

I can understand the rules and expectations for Gifted & Talented class

I can determine when it is best to use a survey to gather data.

I can create a tally chart.

I can create a bar graph.

Instructional Strategies and Activities

1) Introduce rules and expectations for *Gifted and Talented* class. *5 min*

2) BrainPop Video: Introduction to tally charts and bar graphs. *(Linked here)* *4 min, 19 sec*

3) Complete BrainPop quiz about the video together as a class. *(Linked here)* *10 min*

4) BrainPop Game to reinforce and practice concepts from the video.*(Linked here)* *10 min*

5) Complete a survey together as a class. Create a bar graph from the tally chart. Discuss questions we could answer using the bar graph. *10 min*

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of math and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Class discussion (questions and answers), about the topics covered in the BrainPop video.

3) Students will be able to successfully complete the BrainPop game using the skills they learned from the video.

4) Class Bar graph activity

- tally chart

- bar graph

- list of questions (developed as a class), that we could use the bar chart to answer

Instructional Materials and Resources

Gifted & Talented Website(Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (linked here)

Gifted & Talented Drive(Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

All of the times listed above (except for the time of the BrainPop video), are estimates.

Lesson (Math G&T Week 2) Approx. 60 minutes

Student Learning Intentions or We are learning to … (WALT

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT collect data to answer questions about different topics.

3) WALT use tally charts to represent data.

4) WALT create a bar graph to represent data.

Student Success Criteria …

For Warm-up Activities including Breakout EDU: (15-20 minutes)

I can stretch my thinking to help me solve math puzzles and logic puzzles.

I can use my knowledge of addition and subtraction to recognize relationships between numbers in a puzzle.

For Lesson 2

I can understand the rules and expectations for Gifted & Talented class

I can define the words survey, tally chart, bar graph.

I can create a tally chart.

I can create a bar graph.

Instructional Strategies and Activities

1) Review the rules and expectations for *Gifted and Talented* class. *5 min*

2) Warm-Up Activities

- Breakout EDU *Breakout of the Day (linked here).* Students will login using their school Google account. Click here for the teacher login page.

- Addition Search #1 Activity (linked here).

3) Complete m&m graphing activity (linked here). *(20 minutes)*

4) Class discussion (questions, answers and thoughts *(5-10 minutes)*

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of math and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on the class expectations will help them be successful in *Gifted & Talented* class.

2) Class discussion (questions and answers), about the *Breakout of the Day* puzzle.

4) m&m tally chart and Bar graph activity (*20 minutes)*

- tally chart

- bar graph

- list of questions (developed as a class), that we could use the bar chart to answer

Instructional Materials and Resources

Gifted & Talented Website(Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (linked here)

m&m Bar Graph Activity (linked here).

Gifted & Talented Drive(Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

All of the times listed above are estimates.

Lesson (Math G&T - Lesson 3) Approx. 60 minutes

Student Learning Intentions or We are learning to … (WALT

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT collect data to answer questions about different topics.

3) WALT to use experiments to learn about probability.

4) WALT make predictions about the results of an experiment.

5) WALT use graphic displays to understand probability.

Student Success Criteria …

For Warm-up Activities including Breakout EDU: (15-20 minutes)

I can stretch my thinking to help me solve math puzzles and logic puzzles.

I can use logic and reasoning to complete a 4x4 Sudoku puzzle.(Linked here)

For Lesson 3

I can define the words *probability, prediction, event, result, and experiment.*

I can make predictions about the outcome of an event.

I can make a bar graph to help me analyze the results of an experiment.

Instructional Strategies and Activities

1) Review the rules and expectations for *Gifted and Talented* class **as needed**. (2 *minutes)*

2) Warm-Up Activity

- 4x4 Sudoku puzzle.*(Linked here) (10 minutes)*

3) BrainPop Jr. video about probability. (Linked here)

4) Complete penny-flipping probability experiment. (Linked here) *(20 minutes)*

5) Play *Heads & Tails Snake Race*. (Linked here)

6) Class discussion (questions, answers and thoughts *(5-10 minutes)*

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of math and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful breakout.

2) Students complete a 4x4 Sudoku puzzle. Their work is correct when the grid is complete and there are no repeating numbers in any row or column.

For the main part of the lesson:

1) Class discussion. Students will reflect on the class expectations will help them be successful in *Gifted & Talented* class.

2) Class discussion (questions and answers), about the *Breakout of the Day* puzzle.

4) Penny-flipping experiment

- bar graph

- Statement about each group's prediction.

- Was their prediction accurate?

- Can we use out results to craft a conclusion about our experiment using the concept of *probability?*

Instructional Materials and Resources

Gifted & Talented Website(Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (Linked here)

Penny-Flipping Experiment (Linked here).

Gifted & Talented Drive(Linked here).

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

The first time the students play Sudoku it takes a while for them to develop strategies for success.

All of the times listed above are estimates.

Lesson (Math G&T - Week 4) Approx. 60 minutes

Student Learning Intentions or We are learning to … (WALT

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT to use a game to learn about how probability can affect strategy.

Student Success Criteria …

For Warm-up Activities including Breakout EDU: (15-20 minutes)

I can stretch my thinking to help me solve math puzzles and logic puzzles.

I can use logic and reasoning to complete a 4x4 Sudoku puzzle.(Linked here)

I can use my spatial awareness, logical reasoning, critical thinking, and perseverance to duplicate digital artwork using the shapes, lines and colors commands on Google Drawings.

For Lesson 4

I can learn how to play *Beat the Clock*

I can analyze and change my strategy as I play the game

I can use what I know about probability to help me make decisions in the game.

Instructional Strategies and Activities

1) Review the rules and expectations for *Gifted and Talented* class **as needed**. (2 *minutes)*

2) Warm-Up Activity

Breakout EDU - Lock of the Day (Linked here) ~or~ Sudoku puzzle.*(Linked here) (10 minutes) - Students can choose to try a Sudoku larger that 4x4*

3) Complete a Shapegram Zipper Challenge. (Linked here)

4) Play *Beat the Clock* (Linked here) The probability of rolling the number you need to help you in the game changes based on your actions in the game. This will be discussed as students are playing the game. They may choose

to change their strategies on a 2nd play-through of the game based on what they learn about probability on the first play-through. *(30 minutes)*

5) Class discussion (questions, answers and thoughts- this will occur throughout the the game.

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of math and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful breakout. ~or~

2) Students will know if they have used the proper tools in Google Drawings if there drawing is identical to the original.

For the main part of the lesson:

1) Class discussion (questions and answers), about the *Breakout of the Day* puzzle.

2) - *Beat the Clock* game

- How did you use your experience with probability in the first game to change your strategies for the 2nd game?

- Students share a strategy they think worked for them.

Instructional Materials and Resource

Gifted & Talented Website(Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (Linked here)

Beat the Clock Game (Linked here).

Shapegrams Zipper Challenge (Linked here)

Gifted & Talented Drive(Linked here).

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Students will develop strategies for the game as they reflect on their own choices and see what their opponents have done.

All of the times listed above are estimates.

Lesson (Math G&T - Week 5) Approx. 60 minutes

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT collect data to answer questions about different topics.

Student Success Criteria …

For Warm-up Activities including Breakout EDU: (15-20 minutes)

I can stretch my thinking to help me solve math puzzles and logic puzzles.

I can use my spatial awareness, logical reasoning, critical thinking, and perseverance to duplicate digital artwork using the shapes, lines and colors commands on Google Drawings.

For Lesson 5

I can create survey my classmates using Google Forms.

I can create a Google Form to survey my classmates.

Instructional Strategies and Activities

1) Review the rules and expectations for *Gifted and Talented* class **as needed**. (2 *minutes)*

2) Warm-Up Activity

Breakout EDU - Lock of the Day (Linked here) *(10 - 15 minutes)*

3) Watch short video **"Conducting Simple Surveys Education Cartoon for kids" (Linked here)** ***(3 minutes)***

4) Student will learn how to use Google Forms by making a survey for their G&T classmates. *(30 minutes) A blank Google form will be assigned to each student Using Google Classroom*

5) Class discussion to decide what question the students should ask for a school-wide survey.

6) Students will verbally present the results of their survey.

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of math and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful breakout.

2) For Shapegrams Zipper Challenge - Students will know they have completed the challenge when their drawing is identical to the original.

For the main part of the lesson:

1) Class discussion (questions and answers), about the *Breakout of the Day* puzzle.

2) Students will present their findings from the survey they conducted.

Instructional Materials and Resource

Gifted & Talented Website(Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (Linked here)

Google Classroom (Linked here)

Gifted & Talented Drive(Linked here)

YouTube Video - *Conducting Simple Surveys Education Cartoon for Kids* (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

All of the times listed above are estimates.

Lesson (Math G&T - Week 6) Approx. 60 minutes

Student Learning Intentions or We are learning to … (WALT

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT collect data to answer questions about different topics.

Student Success Criteria …

For Warm-up Activities including Breakout EDU: (15-20 minutes)

I can stretch my thinking to help me solve math puzzles and logic puzzles.

I can use my spatial awareness, logical reasoning, critical thinking, and perseverance to duplicate digital artwork using the shapes, lines and colors commands on Google Drawings.

For Lesson 6

I can learn how to collectively make a survey with my classmates about a topic we are all interested in and have questions about.

I can create survey my school using Google Forms.

I can create a Google Form to survey my school.

Instructional Strategies and Activities

1) Review the rules and expectations for *Gifted and Talented* class **as needed**. (2 *minutes)*

2) Warm-Up Activity

Breakout EDU - Lock of the Day (Linked here) *(10 - 15 minutes)*

3) Students will verbally present the results of the survey they conducted last class. *(10 minutes)*

4) Class discussion to decide what question the students should ask for a school-wide survey. *(5 - 10 minutes)*

5) Students will make a Google Form together to survey the school about the topic they agreed upon. *(20 minutes)*

6) The Google Form will be sent to classroom teachers to share with their students via Google Classroom or Clever.

7) Class Discussion (*Questions & Answers).*

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of math and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful breakout.

2) For Shaegrams - Students will know they have successfully completed the Zipper Challenge when their drawing is isentiticle to the original drawing.

For the main part of the lesson:

1) Class discussion (questions and answers), about the *Breakout of the Day* puzzle.

2) Students will present their findings from the survey they conducted with their classmates.

3) Discussion about findings.

4) Question and answer session about school-wide survey.

Instructional Materials and Resource

Gifted & Talented Website(Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (Linked here)

Google Classroom (Linked here)

Gifted & Talented Drive(Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

All of the times listed above are estimates.

Lesson (Math G&T - Week 7) Approx. 60 minutes

Student Learning Intentions or We are learning to … (WALT

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT collect data to answer questions about different topics.

3) WALT use graphs to help us understand the data we collect.

Student Success Criteria …

For Warm-up Activities including Breakout EDU: (15-20 minutes)

I can stretch my thinking to help me solve math puzzles and logic puzzles.

I can use my spatial awareness, logical reasoning, critical thinking, and perseverance to duplicate digital artwork using the shapes, lines and colors commands on Google Drawings.

For Lesson 7

I can explain what *data* means.

I can export the results of the survey I sent to my G&T classmates to Google Sheets.

I can export the results of our school-wide survey to Google Sheets.

I can uses Google Sheets to create different types of Graphs from the results of my small survey - the survey for my classmates.

I can uses Google Sheets to create different types of Graphs from the results of our school-wide survey.

Instructional Strategies and Activities

1) Review the rules and expectations for *Gifted and Talented* class **as needed**. (2 *minutes)*

2) Warm-Up Activity

Breakout EDU - Lock of the Day (Linked here) *(10 minutes)*

3) Students will review the meaning of the word *data*. They will have learned this from the BrainPop Jr. video about tally charts and bar grphs.

4) Students will learn how to export the results of their survey for their G&T classmates to Google Sheets. *(10 minutes)*

5) Students will learn how to make charts and graphs using Google Sheets. *(20 minutes)*

- Students will experiment with creating different types of charts and graphs

- Students will decide which type of graph makes their data easy to understand

6) As a class we will export the results of the school-wide survey to Google Sheets. Students will decide which type of graph makes their data easy to understand.

7) Class Discussion (*Questions & Answers).*

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of math and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful breakout.

2) For Shapegrams - Students will they they have successfully completed the Zipper Challenge when their drawing is Identical to the original drawing.

For the main part of the lesson:

1) Class discussion (questions and answers), about the *Breakout of the Day* puzzle.

2) Students will present their findings from the survey they conducted with their classmates.

3) Discussion about findings.

4) Question and answer session about school-wide survey.

Instructional Materials and Resource

Gifted & Talented Website(Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (Linked here)

Google Classroom (Linked here)

Gifted & Talented Drive(Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

All of the times listed above are estimates.

Lesson (Math G&T - Week 8) Aprrox. 60 minutes

Student Learning Intentions or We are learning to … (WALT

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT use graphs to help us understand the data we collect.

Student Success Criteria …

For Warm-up Activities including Breakout EDU: (15-20 minutes)

I can stretch my thinking to help me solve math puzzles and logic puzzles.

I can use my spatial awareness, logical reasoning, critical thinking, and perseverance to duplicate digital artwork using the shapes, lines and colors commands on Google Drawings.

For Lesson 8

I can explain what *data* means.

I can export the results of the survey I sent to my G&T classmates to Google Sheets.

I can export the results of our school-wide survey to Google Sheets.

I can uses Google Sheets to create different types of Graphs from the results of my small survey - the survey for my classmates.

I can uses Google Sheets to create different types of Graphs from the results of our school-wide survey.

Instructional Strategies and Activities

1) Review the rules and expectations for *Gifted and Talented* class **as needed**. (2 *minutes)*

2) Warm-Up Activity

Breakout EDU - Lock of the Day (Linked here) *(10 minutes)*

3) Students will review the meaning of the word *data.* They learned this word in the BrainPop video about tally charts and graphs. They also learned about it in the YouTube Video - *Conducting Simple Surveys Education Cartoon*

for Kids (Linked here)

4) Students will make a poster to display the chart from their small survey. They will add any needed definitions and information to the chart. They can also decorate the poster board as long as it is relevant to their data.

5) Students will work together to make a poster to display the chart from our school-wide survey. They will add any needed definitions and information to the chart. They can also decorate the poster board as long as it is

relevant to the data.

6) The charts will go on display for the school to see. The G&T students will be the experts on the data so they will be able to answer questions other students may have regarding the information presented in their posters.

7) Class Discussion (*Questions & Answers).*

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of math and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful breakout.

2) For Shapegrams - Students will they they have successfully completed the Zipper Challenge when their drawing is Identical to the original drawing.

For the main part of the lesson:

1) The poster presenting the results of each individual student's survey.

2) The poster presenting the results of the school-wide survey.

Instructional Materials and Resource

Gifted & Talented Website(Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (Linked here)

Google Classroom (Linked here)

Gifted & Talented Drive(Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

All of the times listed above are estimates.

Lesson (Math G&T - Holidays & Extras) Approx. 60 minutes

Student Learning Intentions or We are learning to … (WALT

1) WALT collect data to answer questions about a topic of interest.

2) WALT uses math operations to solve problems.

3) WALT use math in fun ways to solve a mystery.

Student Success Criteria …

I can stretch my thinking to help me solve math puzzles and solve mysteries.

I can survey my classmates and make a bar graph using the results of the survey.

I can solve math problems that are built into a mystery story. The correct answers give me clues to solve the mystery.

Instructional Strategies and Activities

1) Review the rules and expectations for *Gifted and Talented* class **as needed**. (2 *minutes)*

2) Students conduct a Halloween candy survey for their 2nd-grade class. They create a bar graph using the results. (Linked here)

3) Students complete a Halloween-themed digital breakout. (Linked here)

4) Class Discussion (*Questions & Answers).*

5) Holiday-Themed Challenges for Halloween-Thanksgiving-December Holidays (Linked here)

Formative Assessments

For the main part of the lesson:

1) Students display their poster with the results of their Halloween candy survey. Discussion about findings.

2) Students will get a message when they successfully "Break Out" of the Halloween-themed escape room.

3 Students will successfully complete the holiday challenges.

Instructional Materials and Resource

Halloween Candy Graphing Activity (Linked here)

Holiday Challenges (Linked here)

Gifted & Talented Website(Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (Linked here)

Google Classroom (Linked here)

Gifted & Talented Drive(Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

All of the times listed above are estimates.

Modifications and/or Accommodations

Suggested Modifications (ELL, Sp. Ed, GIfted, At-risk of Failure)

All accommodations specified on each student's IEP or 504 will be followed.

Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Integration of Diversity, Equity and Inclusion; Climate Change; Informational and Media Literacy

For diversity students will have access to the following websites:

https://mathandmovement.com/famous-black-mathematicians-and-their-contributions/ - Math and Movement - *9 Famous Black Mathematicians and Their Contributions*

https://www.ams.org/about-us/edi-community - The American Mathematical Society - *Recognizing Diverse Mathematicians*

For climate change students will have access to the following websites:

https://youtu.be/VZJXBEK6bZQ?si=vGOKTLOCoc_Na6V2 - "The Maths Behind Climate Change"

https://youtu.be/8zx1FTRU2C4?si=zaXcy7CgWWEd9d6m - "Using Maths to Solve Climate Change"

Internet safe search techniques will be reinforced when looking up information.

Other multicultural links can be found on the Gifted & Talented *Holidays* folder(Linked here)

New Jersey Student Learning Standards: Content Area

Through the course of the G&T Mathematics Unit, students will achieve the standards listed below.

MATH.K-12.1	Make sense of problems and persevere in solving them
MATH.K-12.2	Reason abstractly and quantitatively
MATH.K-12.3	Construct viable arguments and critique the reasoning of others
MATH.K-12.4	Model with mathematics
MATH.K-12.5	Use appropriate tools strategically
MATH.K-12.6	Attend to precision
MATH.K-12.7	Look for and make use of structure
MATH.K-12.8	Look for and express regularity in repeated reasoning

Integration of Career Readiness. Life Literacies and Key Skills

These standards mention work and employment and management. These same standards can be used for group work.

CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP11	Use technology to enhance productivity.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.

Integration of Computer Science and Design Thinking

Through the course of the G&T Mathematics Unit, students will achieve the standards listed below.

CS.CS	Computing Systems
CS.K-2.DA	Data & Analysis
CS.K-2.EC	Ethics & Culture
CS.K-2.IC	Impacts of Computing
CS.K-2.NT	Nature of Technology
CS.K-2.ITH	Interaction of Technology and Humans
	Individuals use computing devices to perform a variety of tasks accurately and quickly. Computing devices interpret and follow the instructions they are given literally.
	Real world information can be stored and manipulated in programs as data (e.g., numbers, words, colors, images).

Interdisciplinary Connections: NJSLS for ELA, Social Studies, Science and/or Math

The projects and activities that are explained in the lessons for this curriculum intersect the areas of math, science and language arts. Breakout EDU, our digital breakout resource requires students to use all different areas of loig, thought, reasoning and language skills.