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Resource ID#: 164903

The Doorbell Rang - A Lesson in Division and Theater

Through the use of a theatrical performance the students will use math counter manipulatives to make equal groups, demonstrating understanding of the concept of division.

Subject(s): Theatre, Mathematics

Grade Level(s): 3

Intended Audience: Educators

Instructional Time: 3 Hour(s)

Resource supports reading in content area: Yes

Keywords: division, play, theater, performance

Resource Collection: Arts for a Complete Education (ACE)

LESSON CONTENT

Lesson Plan Template: General Lesson Plan

Learning Objectives: What should students know and be able to do as a result of this lesson?

The students will be able to solve division problems by using the strategy act it out, use models to explore the meaning of division (sharing), and use models to explore the meaning of division (measurement)

The students will be able to be assigned parts to a play adapted from the story, The Doorbell Rang.

Prior Knowledge: What prior knowledge should students have for this lesson?

Students should be familiar with the following vocabulary:

divide

equal groups

stage left

stage right

center stage

action

cut

projection

Guiding Questions: What are the guiding questions for this lesson?

How can you use the strategy act it out to solve problems with equal groups?

Teaching Phase: How will the teacher present the concept or skill to students?

Teacher will read aloud: The Doorbell Rang by Pat Hutchins to understand how division and multiplication are related. We will practice in class then perform in drama class with Mrs. Smith she will work on staging and vocal projection.

Review multiplication and discuss the concept of division as sharing. Students will be asked provide examples from the story. The students will discuss how multiplication is related to division.

The Doorbell Rang

By: Pat Hutchins

(Play adapted by Ms. LeMaster's Third Grade Class)

Cast:

Narrator 1	Narrator 2
Ma	Victoria
Sam	Tom
Hannah	Peter
Little Brother	Joy
Simon	4 cousins
Math Wiz #1	Math Wiz #2
Grandma	

Narrator 1: The Doorbell Rang by Pat Hutchins is a lesson in division. The characters learn how to divide items into equal groups in order to share with one another.

Narrator 2: Our class has adapted the original story version into a play to visually demonstrate the math concept of division. We hope you enjoy our presentation of The Doorbell Rang.

Ma: "I've made some cookies for tea."

Victoria: "Good!"

Sam: "We're starving!" (Sam holds his stomach)

Ma: "Share them between yourselves. I made plenty."

Math Wiz #1: (Enters holding sign) 12 cookies divided between 2 people equals 6 cookies each.

(Sam and Victoria count as they divide up the cookies)

Victoria: "They look as good as Grandma's"

Sam: "They smell as good as Grandma's"

Ma: "No one makes cookies like Grandma"

Narrator 1: The doorbell rang. (Tom and Hannah ring the bell) It was Tom and Hannah from next door. (Enter Tom and Hannah)

Ma: (answers the door) "Come in. You can share the cookies."

Math Wiz #2: (enters holding sign) 12 cookies divided between 4 people equals 3 cookies each.

(Sam and Victoria share cookies with Tom and Hannah)

Tom: "They smell as good as your Grandma's"

Hannah: "And they look as good"

Ma: "No one makes cookies like Grandma's"

Narrator 2: The doorbell rang. (Peter rings the bell) It was Peter and his little brother. (Enter Peter and little brother)

Ma: "Come in. You can share the cookies."

Math Wiz #1: (Enters holding sign) 12 cookies divided by 6 people equals 2 cookies each

Peter: "They look as good as your Grandma's"

Little Brother: "And they smell as good"

Ma: "Nobody makes cookies like Grandma's"

Narrator 1: The doorbell rang. (Joy rings the bell) It was Joy and Simon and their 4 cousins.

Ma: "Come in. You can share the cookies."

Math Wiz #2: (enters holding sign) 12 cookies divided between 12 people equals 1 cookie each.

Joy: "They smell as good as your Grandma's."

Simon: "And look as good."

Ma: "No one makes cookies like Grandma."

Narrator 2: The doorbell rang... and rang. (Everyone looks at the door surprised)

Cousin 1: "Oh, no!"

Cousin 2: "Who could that be?"

Cousin 3: "How are we going to share the cookies now?"

Cousin 4 "What are we going to do?"

Ma: "Oh, dear. Perhaps you better eat them before we open the door."

Sam: "No, we'll wait."

(Ma goes to the door)

Narrator 1: It was Grandma with an enormous tray of cookies. (Enter grandma)

Grandma: How nice to have so many friends to share them with. It's a good thing I made a lot."

Ma: "And no one makes cookies like Grandma."

Everyone: YEA!!!! Thanks Grandma!!!!!!

Guided Practice: What activities or exercises will the students complete with teacher guidance?

Students will rehearse how to enter/exit stage, face audience while speaking, use vocal inflection and projection, facial and body expression and movement, and how to incorporate props appropriately while they are performing their part in the play

The teacher will either assign or randomly give each student a part in the play. The class will practice reading through the play twice.

The teacher will then review arts vocabulary and staging by modeling where and how the students are to enter/exit, stand facing the audience while speaking their lines, how and when to use props and project their voices as they act out the story.

Independent Practice: What activities or exercises will students complete to reinforce the concepts and skills developed in the lesson?

Students will do a final performance and it can be videotaped so the students can see their performance and assess how they did with staging, expression, inflection, projection and timing

Closure: How will the teacher assist students in organizing the knowledge gained in the lesson?

Have students reflect in their journals upon what they have learned in theater and in math.

Summative Assessment

Students will answer the essential questions in their math journal:

How can you use the strategy act it out to solve problems with equal groups?

How can you model a division problem to find how many in each group?

How can you model a problem to find how many equal groups?

Formative Assessment

Students will rehearse how to enter/exit stage, face audience while speaking, use vocal inflection and projection, facial and body expression and movement, and how to incorporate props appropriately while they are performing their part in the play

Feedback to Students

Feedback to students will be continual throughout the lesson, at integral points in the lesson, teacher should stop, discuss and give feedback.

ACCOMMODATIONS & RECOMMENDATIONS

Accommodations:

To differentiate the lesson, use manipulatives

Students needing extra assistance shall be in close proximity to the teacher.

Teacher to provide verbal/ non-verbal cues

Teacher to break larger tasks into smaller steps

Provide students needing extra assistance with small group instruction

Special Materials Needed:

Tray, fake "cookies"

graduation cap

scripts ** See attached play

posters that illustrate the division in the story

a table

12 chairs

a bell

Books: The Doorbell Rang by Pat Hutchins and Go Math! Houghton Mifflin Harcourt

Further Recommendations:

I like the fact that this lesson allows the students to become a part of the lesson and it is cooperative. They are helping one another understand the concept of division because as each set of characters enter the scene the students on stage must figure out how they will 'share' or divide the cookies they have so that each person has an equal number.

SOURCE AND ACCESS INFORMATION

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Related Standards

Name	Description
TH.3.F.1.1:	Create and/or collect appropriate props and costumes and use them to help tell a story.
TH.3.H.3.3:	Plan and perform a simple performance based on a theme from another content area.
MAFS.3.OA.1.2:	<p>Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups <i>can be expressed as $56 \div 8$.</i></p> <p>Remarks/Examples: Examples of Opportunities for In-Depth Focus</p> <p>Word problems involving equal groups, arrays, and measurement quantities can be used to build students' understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations.</p>
MAFS.3.OA.1.3:	<p>Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p> <p>Remarks/Examples: Examples of Opportunities for In-Depth Focus</p> <p>Word problems involving equal groups, arrays, and measurement quantities can be used to build students' understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations.</p>