

PIZZA CO.



Osmo

# Financial Literacy Math Station

*Lesson Plan*

**Teacher:** Mrs. Brown 5th Grade

## Overview & Purpose

The purpose of this lesson is for students to put previously learned mathematical skills into context through real-world problem-solving. Through this math station, students will have the opportunity to practice real-world math problems, financial literacy, and

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social-emotional skills. This lesson was used in a 5th-grade classroom, but with the game's feature to adjust to the student's ability and the JR player mode, it could be used K-5. This lesson also incorporates the Arkansas Division of Elementary and Secondary Education "The G.U.I.D.E. for Life program" concepts. Instilling these "real-world" skills in our students helps produce well-rounded citizens, stronger communities, and more effective employees.

## Objectives

1. Students will learn money concepts and how to grow their virtual business through earning, saving profits, and reinvesting.
2. Students will build on previous math skill lessons (addition, subtraction, and fractions.)
3. Students will increase mental computation skills and use mental math strategies to add and subtract numbers fluently during gameplay.
4. Students will learn to read non-verbal cues and increase their social-emotional skills.

## Standards

1. 5.NF.B.6 Solve real-world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
2. 5.NF.B.7.C Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share  $\frac{1}{2}$  lb of chocolate equally? How many  $\frac{1}{3}$ -cup servings are in 2 cups of raisins?
3. 4.MD.A.2 • Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money including the *ability to make change*; including problems involving simple fractions or decimals,

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and problems that require expressing measurements given in a larger unit in terms of a smaller unit

4. ADE G.U.I.D.E. for Life Standards- I work with others to achieve common goals. I have the ability to read and respond to individual and environmental cues.

## Materials Needed

This activity can be completed whole class, small groups, or in station rotations.

1. Osmo Pizza Co. Game (You will need one for each group that you have)
2. Osmo Base (You will need one for each group that you have)
3. Ipad (You will need one for each group that you have)
4. Paper and pencil or LCD writing tablets \*optional

## Verification

1. Review adding and subtracting mental math with students. The game is useful for providing practice with addition, subtraction, and fractions(upper level of the game), but it does not explicitly teach these, so make sure students have already had some practice with mental math strategies prior to playing the game.
2. Go over vocabulary that is in the game such as cashier, cook, customer, delivery, ingredients, customer satisfaction, profit, customer service, hospitality, investing.
3. Discuss social cues and the importance of non-verbal communication. Social cues are the signals people send through body language and expressions. In the game, if the customers are happy, they can leave positive reviews and more tips for the restaurant.

## Activity

Begin by previewing the game with students using the free Osmo projector app to project the game for all students to see. Model how to play the game and use think-aloud strategies to show students how you use mental math

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during the gameplay. Have a few student volunteers come up and play and share their thinking as well. You can also show this [video](#) to students to give a brief overview of the game.

Break students up into groups of 5. One student will be the cook, one will be the cashier, and the remaining 3 students will be customers. (You can make your groups bigger or smaller depending on how many Osmo bases, Ipads, and Pizza Co. games that you have.) Explain how each student will have the chance to be in all roles so that they can take a customer's order, fill it, and correctly give back change. The students who are the customers will get to "order" the pizza on the screen and make sure it is made correctly and voice their concern if it is not. Paper or LCD writing tablets can be used to jot down notes or thoughts during gameplay. Encourage students to work with their partner and give students time to play the game and ensure that all group members have had a chance to play each role.

After playing the game, meet back together as a whole group. Lead students in a whole-class discussion about the mental math strategies they used during gameplay. Was it easier to subtract or add up to the total? Why? Which combinations were the easiest to add/subtract, and which were the hardest? Next, discuss with students about the social cues they noticed from the customers during gameplay. Why is it important to notice non-verbal cues?. Discuss how we can use social cues in the classroom. Finally, discuss the benefits of saving and reinvesting their profit. Students will be able to decide if they want to save the profit they earned or if they want to reinvest the money into upgrading their shop. This lesson can be extended over a course of weeks so that students are able to earn more profit and continue to save, upgrade, and reinvest in their virtual shop.

Closing: Students will make a reflection video individually on [Flipgrid](#) to talk about what they have learned from this lesson. Students will first introduce themselves then share 3 things they learned, two things they want to know more about, and one question that they still have.

Virtual Classroom Lesson Application: This game can be played with students virtually through ZOOM (or any other video-based group meeting) and the Osmo Projector free app. During the ZOOM meeting, the teacher can screen share with the Osmo Projector app and can lead the gameplay. Students can play along and solve the mental math on their end and chime in to discuss the social cues. After playing the game continue the discussion from above on ZOOM with students.



