LESSON PLAN · RUCKUS K–2 MATH & MEASUREMENT LAB

K–2 Pizza Math & Measurement Lab

60-Minute Instructor-Led Math/Science Supplemental Teaching Session

Program Overview

This session is a structured K–2 math and science supplemental teaching class conducted in the Ruckus restaurant kitchen. Students use real pizza-making materials — sauce, cheese, dough, toppings, measuring cups, and a digital gram scale — as hands-on manipulatives to practice counting, measurement, fractions, and observation of physical change. Ruckus staff operate all restaurant equipment including ovens. Students do not receive culinary instruction.

Session Details

Grade Range	Kindergarten – Grade 2
Session Length	60 minutes
Group Size	Open enrollment — contact Ruckus to schedule
Setting	Ruckus restaurant kitchen
Subjects	Mathematics (primary), Science practices/observation (secondary)
This is NOT	Culinary instruction, cooking class, recipe lesson, or meal service

Learning Objectives

1. Count objects with one-to-one correspondence and record totals accurately.
2. Compare quantities using more, fewer, and equal.
3. Measure volume using standard measuring cups (¼ cup and ½ cup) and identify the greater amount.
4. Read a digital gram scale display and identify which of two portions is heavier. No calculation required.
5. Partition a circular form into two and four equal shares and identify each as one-half and one-quarter.
6. Observe and describe observable physical properties of cheese and dough before and after heating.

NC Standards Alignment

Skill	NC Standard
Counting / Comparison	K.CC.B.4, K.CC.C.6, K.CC.C.7
Volume Measurement	1.MD.A.2, 2.MD.A.1
Comparing Weight	K.MD.A.1, K.CC.C.7, 1.MD.A.1
Fractions (halves/quarters)	1.G.A.3, 2.G.A.3
Observing Physical Change	K.P.2.1, 2.P.2.1

60-Minute Instructional Flow

Time	Segment	Academic Objective	Evidence
0–3 min	Welcome & Goals	Establish academic frame; state objectives.	Lesson outline
3–10 min	Counting Toppings	Count 8–12 toppings; record total; compare groups.	Worksheet §1
10–20 min	Measure by Volume	Measure ¼ cup and ½ cup sauce; identify greater amount.	Worksheet §2
20–30 min	Measure by Weight	Weigh two cheese portions on digital scale; read display; circle heavier.	Worksheet §3
30–40 min	Fractions: Halves	Identify and model ½ on circular pizza form.	Worksheet §4
40–46 min	Fractions: Quarters	Identify and model ¼ on 4-section model.	Worksheet §4
46–52 min	Science Observation	Observe heat-related change; record one observation.	Worksheet §5
52–58 min	Exit Ticket	3-question formative assessment; instructor checklist.	Exit ticket + checklist
58–60 min	Close / Handoff	Summarize skills; parent handoff summary.	—

Materials

- Circular pizza dough rounds or laminated circular mats (one per student)
- Pre-portioned sauce in small containers
- Pre-portioned shredded mozzarella cheese in small cups
- Assorted pizza toppings (8–15 pieces per student)
- Measuring cups: ¼ cup and ½ cup (one set per student)
- Digital gram scale (one per 2 students)
- Student math worksheet (one per student)
- Exit ticket (one per student)
- Instructor checklist (one per student)
- Pencils, gloves, wipes

Safety & Scope

Ruckus staff operate all restaurant equipment including ovens. Students do not operate ovens, commercial equipment, or heat sources. Any tasting or eating, if offered by the host site, occurs only after the 60-minute instructional portion, is optional, and is outside the educational claim and billing for this session.

STUDENT WORKSHEET · RUCKUS K–2 MATH & MEASUREMENT LAB

Pizza Math & Measurement Worksheet

Name: _____ Date: _____ Instructor: _____

Before We Start — Prediction

Think about it before you pour. Circle your prediction.

Do you think ¼ cup of sauce will be a LOT or a LITTLE for your pizza?	A LOT A LITTLE

Section 1 — Sauce Measurement

A small pizza needs exactly ¼ cup of sauce. Pour ¼ cup of sauce and spread it on your pizza.

What number is on the measuring cup you used?	
Circle the cup you used:	¼ cup ½ cup 1 cup

Section 2 — Measuring Cheese by Weight

Put your cheese on the scale. Read the number and write it below.

My cheese weighs:	___ grams

Section 3 — Counting: Pepperoni Coverage

Cover your WHOLE pizza with pepperoni. Count how many it takes.

How many pepperoni did it take to cover the whole pizza?	

Section 4 — Fractions: Mushroom Coverage

Now cover exactly HALF of your pizza with mushrooms.

How many mushrooms did it take to cover half the pizza?	
What fraction of your pizza did the mushrooms cover? Circle:	Whole Half Quarter

If you covered the OTHER half with mushrooms too, how many mushrooms would you need in total?	

Section 5 — Comparing Toppings

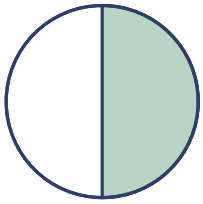
Look at your pizza. Think about the pepperoni and mushrooms you used.

Did you use MORE pepperoni or MORE mushrooms? Circle:	Pepperoni Mushrooms Same
To cover the WHOLE pizza with mushrooms, would you need MORE or FEWER mushrooms than the pepperoni you used? Circle:	More Mushrooms Fewer Mushrooms Same Amount

Section 6 — Fractions

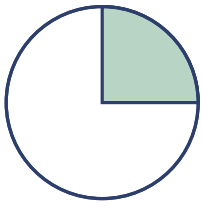
Look at each pizza circle. Part of it is shaded. Write the fraction that shows the shaded part.

What fraction is shaded?



Write the fraction:

What fraction is shaded?



Write the fraction:

Section 7 — Science Observation

Watch your pizza go into the oven. Circle what you observe before and after.

Before the oven, the dough was (circle):	soft hard flat
After the oven, the dough was (circle):	puffy flat hard

Before the oven, the cheese was (circle):	soft hard gooey
After the oven, the cheese was (circle):	melted solid hard
Draw or write ONE thing that changed:	

Section 8 — What Did You Do First?

Think about the order you built your pizza. Write or draw your answers.

What was the FIRST thing you put on your pizza?	
What was the SECOND thing you put on your pizza?	
What was the THIRD thing you put on your pizza?	
What was the LAST thing you put on before it went in the oven?	

Exit Ticket — 3 Questions

Name: _____ Date: _____ Instructor: _____

Answer each question as best you can. Circle your answer or write a number in the box.

Question 1 — Volume

Which amount is MORE?

¼ cup ½ cup

Circle your answer above.

Question 2 — Weight

Cheese A weighs 12 grams. Cheese B weighs 15 grams.

Which is heavier?	**Cheese A Cheese B**

Question 3 — Fractions

Shade or label exactly ONE HALF (½) of the circle below.

(Draw a circle here and shade half of it.)

Instructor use only: Q1 ■ Correct ■ Incorrect Q2 ■ Correct ■ Incorrect Q3 ■ Correct ■ Incorrect

INSTRUCTOR CHECKLIST · RUCKUS K–2 MATH & MEASUREMENT LAB

Per-Student Mastery Checklist

Complete one checklist per student. Retain for records.

Session Information

Student Name:	
Session Date:	
Instructor Name:	
Group Size:	

Skill Assessment

For each skill, mark M (Mastery) or E (Emerging). Add notes in the right column.

Skill	M	E	Notes / Observations
Counts objects accurately to 10 with one-to-one correspondence.	■	■	
Compares two quantities correctly using more / fewer / equal.	■	■	
Correctly identifies which of ¼ cup and ½ cup contains more.	■	■	
Reads a digital gram scale display and records the number shown.	■	■	
Identifies the heavier of two cheese portions by comparing scale readings.	■	■	
Identifies and models one-half (½) on a circular form.	■	■	
Attempts to identify and model one-quarter (¼).	■	■	
Records one valid observation of physical change from heat.	■	■	
Completes exit ticket (Q1 volume, Q2 weight, Q3 fraction).	■	■	

Overall Session Notes

Instructor Signature: _____ Date: _____