

The Five Bakery

Goal of the lesson:

Engage students in thinking about:

1. How to compose numbers to 5
2. Combining two numbers to make 5
3. How to set up a co-created play station for math

Specific Learning Goals (curricular expectations):

By the end of these lessons, students will:

- demonstrate an understanding of number relationships for numbers from 0 to 10, through investigation (e.g., show small quantities using fingers or manipulatives)
- use, read, and represent whole numbers to 10 in a variety of meaningful contexts (e.g., use a hundreds chart to read whole numbers; use magnetic and sandpaper numerals to represent the number of objects in a set; put the house number on a house built at the block centre; find and recognize numbers in the environment; write numerals on imaginary bills at the restaurant at the dramatic play centre)
- investigate and develop strategies for composing and decomposing quantities to 10 (e.g., use manipulatives or “shake and spill” activities)
- investigate addition and subtraction in everyday activities through the use of manipulatives (e.g., interlocking cubes), visual models (e.g., a number line, tally marks, a hundreds carpet), or oral exploration (e.g., dramatizing of songs)

SECONDARY GOALS of the team:

- Create an authentic and play-based activity to engage children in mathematics
- Develop their understanding of composing numbers to five using a five-frame

Materials:

Cinnamon-scented play dough	Red and blue glass gems to represent toppings
Five-frame order forms	Aprons
Baskets	Red and blue markers or crayons
Clipboards	Pencils

Success criteria:

An educator will record an “I can” chart – success criteria – as they come up in the lessons.

Stage 1:

“I can choose from two toppings to make a cookie.”

“I can make a cookie with a total of five toppings.”

Stage 2:

“I can complete an order for my cookie.”

“I can match my order to my cookie.”

Stage 3:

“I can complete an order for my cookie on the five-frame.”

“I can keep the same colours together on the five-frame.”

“I can write a number sentence that matches my order.”

Stage 1:

Activating student thinking:

Having previously explored early number concepts with the students, we introduced the idea of a bakeshop in the dramatic play centre.

- “Have you ever been to a bakery?”
- “What kinds of treats do you see in a bakery?”
- “What kinds of materials/tools would you need to open a bakery?”
- “We’re going to open a bakeshop in our class. It’s called the Five Bakery where everything has a total of five toppings. We will be baking cookies and you get to choose from two different types of toppings.”

Have student model for the rest of the class how to make a cookie using two toppings that total five.

Developmental play starts:

This is a self-selected station that students circulate through over several days.

Students have a chance to explore the materials, choose toppings, and make cookies.

Guiding Questions:

- “How did you make five?”
- “How did you know you have five?”
- “How many red do you have?”
- “How many blue do you have?”

*can use fingers to help students represent five

Stage 2:

Activating student thinking:

Now that students are familiar with the bakeshop and the materials, we introduced the idea of an order form as a representation of composing five.

- “We’re going to hire a baker in the bakery. They will be making the cookies. You’ll have a chance to be the baker, but we need you to fill out orders for the baker so the baker knows what kind of cookie you will want.”
- “Your cookies will still have five toppings and you will choose from two different kinds.”
- “How can we record our orders? What materials would we need to record our orders?”

Introduce paper, markers, and other materials suggested by the students to help them record their orders

Model one possibility of recording an order and show how to match the order to the cookie.

- “How do we know the baker got your order right?”

Developmental play starts:

Students are given the opportunity to place orders, bake cookies, and check their orders.

Guiding Questions:

- “How did you make five?”
- “How did you know you have five?”
- “How many red do you have?”
- “How many blue do you have?”
- “How did you represent your order?”
- “How can you check your order to show it’s correct?”
- If incorrect: “What do you need to change to make the order correct?”

Stage 3:

Activating student thinking:

Re-introduce the five-frame and relate it to the ‘Five Little Monkeys’ activity.

- “How did we use the five-frame in ‘Five Little Monkeys?’”
- “This week we have been placing orders. [Review student samples of orders.] How can we use the five-frame to help with our order taking?”

Model placing an order using the five-frame. Emphasize the need for the colours to stay together.

*Extension: Some students may be ready to write a number sentence. This can be modeled during Stage 3.

Developmental play starts:

Students are given the opportunity to place orders, bake cookies, and check their orders.

Guiding Questions:

- “How did you make five?”
- “How did you know you have five?”
- “How many red do you have?”
- “How many blue do you have?”
- “How did you represent your order in the five frame?”
- “How can you check your order to show it’s correct?”
- If incorrect: “What do you need to change to make the order correct?”
- * “How would you show your order using a number sentence?”

Wrap-up and Student sharing:

At each stage, we had several students show their work. We asked the guiding questions and used the success criteria from each stage to facilitate the sharing. For example:

Stage 1: have students show the cookies they made

Guiding Questions:

- “How did you make five?”
- “How did you know you have five?”
- “How many red do you have?”
- “How many blue do you have?”

*can use fingers to help students represent five

Stage 2: have students share their order forms, cookies, and compare

Guiding Questions:

- “How did you make five?”
- “How did you know you have five?”
- “How many red do you have?”
- “How many blue do you have?”
- “How did you represent your order?”
- “How can you check your order to show it’s correct?”
- If incorrect: “What do you need to change to make the order correct?”

Stage 3: have students share their five-frame order forms, cookies, and compare

Guiding Questions:

- “How did you make five?”
- “How did you know you have five?”
- “How many red do you have?”
- “How many blue do you have?”
- “How did you represent your order in the five frame?”
- “How can you check your order to show it’s correct?”
- If incorrect: “What do you need to change to make the order correct?”
- * “How would you show your order using a number sentence?”

Possible Next Steps:

- Adding an additional topping to introduce three-number combinations to five
- Introducing a new treat in the bakeshop or a brand new activity to make 10