

# Problem Solvers Activity 2: Bear's Birthday

## CHILDREN ARE LEARNING TO... <sup>1</sup>

- Say or sign some number words in sequence (1, 2, 3...), starting with one.
- Understand that counting words are separate words, such as "one," "two," "three" versus "onetwothree".
- Understand that one number word represents one object being counted (one-to-one correspondence).
- Understand that the last number named represents how many objects are in a group (cardinality).
- Understand that it doesn't matter in what order we count objects As long as each item is counted just once, our count is accurate (order irrelevance).

## MATERIALS NEEDED:

1 teddy bear or animal puppet

12 birthday candles

Salt-dough/play-dough/modeling clay (enough to make a "cake" that can hold 6 candles)

4 dice (If possible, chunky dice designed for toddler hands are ideal.)

8 index cards

2 envelopes or resealable bags

**Handout 1: Birthday Cake**

**Handout 2: Birthday Candles**

## PREPARATION:

- Immediately before the activity, make a "cake" out of play-dough large enough to hold 6 candles.
- Make 3 copies of Handout 1 and glue each to sturdy cardboard/manila folder.
- Make 2 copies of Handout 2. Cut out and glue 3 candles to each index card; cut between candles to create a set of 24 candle cards. Place 12 candles in one envelope/bag and 12 in a second envelope/bag.
- Keep the teddy bear, birthday candles and dice close by for the opening portion of the activity. Keep the two birthday cakes and candle cards handy for the group activity.
- Prepare copies of the parent handout for distribution.
- If you plan on implementing the optional book activity, refer to the preparation instructions in that section.

<sup>1</sup> Head Start Early Learning Outcomes Framework: Ages Birth to Five.

<https://eclkc.ohs.acf.hhs.gov/interactive-head-start-early-learning-outcomes-framework-ages-birth-five>

## ACTIVITY INSTRUCTIONS

### ENGAGE

Gather a group of 4 children.

Place the play-dough birthday cake on the floor or table to all children can see.

**ASK:** Problem Solvers, I made a birthday cake! What is your favorite flavor of birthday cake? Tell me about birthdays at your house. *(Lead a short discussion about birthdays.)*

**ASK:** Do you have candles on your birthday cake? *(Show children the birthday candles.)* How old are you now? How many candles do you think you might have on your birthday cake? Why do you think it should be that many? *(Make the connection between candles and a child's age: You are three now, so you had 3 candles on your birthday cake.)*

### EXPAND

**SAY:** Meet my friend Barney *(show children the stuffed bear or puppet)*. It's Barney's birthday! This is his birthday cake! Let's find out how old Barney is, so we know how many candles to put on his cake. Who would like to help me?

**TIP:** Use any stuffed animal or puppet that is handy in your classroom. Give it a name that is familiar to your students in their culture, community and/or home language(s).

Choose a child to roll the die. Point out the dots on the die.

**SAY:** Let's see how many dots there are so we know how old Barney is. That's how many candles we'll put on his cake.

Count out the correct number of candles, one at a time, aloud. Then, as you place them in the cake, count them aloud a second time.

**SAY:** We had \_\_\_ dots on the dice, and we counted out \_\_\_ candles. That means Barney is turning \_\_\_ years old! Let's play again!

Remove the candles. Ask another child to roll the dice. This time, select a child to count out the candles and another child to count/place the candles in the cake. Repeat the game a third time.

### EXPLORE

**Continue playing the game as a group.** Ensure each child has a chance to roll the dice and count out candles, and then count and place the candles in the cake.

**Try *Bear's Birthday* as a partner activity—for children aged 3.5 and up.** Form pairs of children. Give each pair a (paper) birthday cake and envelope/bag of candles. Give each child a dice. One child in the pair should roll their dice; together, they can count the dots and then place that number of candles on their cakes. Then the other child has a turn to roll their dice and the game continues. Give children enough time so that pairs have several turns to roll, count, and place candles.

**OBSERVE** the pairs to see if children are recognizing the quantities on the dice without counting them (subitizing). This is most likely to happen with small numbers (1-3).

**If you see children make a counting error** in recognizing the quantity on the dice or placing that quantity of candles on their cake, you might say: "Hmmm, let's doublecheck." Point to each dot on the dice as you count aloud. When done, ask the child: "Bear is \_\_\_ years old. How many candles does he

need for his cake? (*Wait for child response.*) That's right. He needs \_\_\_\_ candles. Let's count to make sure." Then suggest the child count the candles once more.

## REFLECT

To close the activity, bring the children back together. Use a reflective question/s - like those below - to prompt children's thinking about counting and quantity.

- What did you do to figure out how many candles Bear needed for his cake?
- Tell me how you found out how old Bear was for his birthday.

Take out the candles and play-dough cake one more time.

**SAY:** Before we say good-bye, let's pretend it's our birthday!

Place 3 (or 4, or 5) candles in the cake, based on how old your group is. *Sing Happy Birthday to Us* and then prompt the children to make a wish and pretend to blow the candles out.

## Individualizing the Activity

### MAKE IT MORE CHALLENGING:

- Use two dice together (for a maximum "age" of 12 for the Bear).
- For partner work, have each child roll their own dice, each place their own candles, and then count the number of candles on both cakes (all together).

### MAKE IT LESS CHALLENGING:

- Use smaller quantities. Do this by making your own dice out of a small plastic/wooden cube block using only quantities up to 3. That is, two sides of the block should have one dot each; two sides of the block should have two dots each; and two sides of the block should have 3 dots each.
- Skip the paper cake portion of the activity. Focus on the play-dough cake and real candles as a group activity.

### MAKING CONNECTIONS ACROSS THE DAY:

- When coming inside or going outside, notice and count boots, hats, mittens, jackets.
- When offering children snack, ask if they would like 1, 2, or 3 crackers. Ask them to help you count to "doublecheck."
- Create signs that use the dot patterns from the dice to show how many children can enter each center area during free play. Ask children, "What can you do to figure out if there is still space left in this center area?"
- Point out small quantities that can be understood without counting—like a window with two panes or three light switches.
- Use the dice as a fun way to do transitions. For example, ask a child to roll the dice and have the children jump up and down that many times before transitioning to lunch. Or roll the dice and then do that many stretches before transitioning to nap.

## Song: *It's My Birthday*

**Gather** a teddy bear or bear puppet.

**Introduce the song:** Let's celebrate birthdays! Let's do a birthday dance! (*Have bear do a dance.*)

**Encourage** children to count candles together during the counting part of the song. Keep the teddy bear nearby for the third verse which mentions Bear's birthday.

It's my birthday; I'm so glad.  
It's the best I've ever had  
Counting candles for my cake  
I can't wait until it's baked!

Just today I'm turning three;  
Three is really big, you see!  
Placing candles one by one;  
Blow them out and then we're done!  
1—2—3! (Blow) I'm three years old!

It's your birthday; you're so glad  
It's the best you've ever had!  
Counting candles for your cake  
You can't wait until it's baked!

Just today you're turning four;  
Four is bigger yet, for sure!  
Placing candles one by one;  
Blow them out and then we're done!  
1—2—3--4! (Blow) You're four years old!

It's Bear's birthday; they're so glad  
It's the best they've ever had!  
Counting candles for their cake  
They can't wait until it's baked!

Just today they're turning five  
Five's so big, they dance and jive!  
Placing candles one by one;  
Blow them out and then we're done!  
1—2—3—4—5! (Blow) Bear is five years old!

### BUILD ON THE SONG:

Use a feltboard to make the song interactive. Create a felt birthday cake along with 5 felt candles. As the song unfolds, pause the recording and select a child/ren to count out 3, 4, and 5 felt candles to place on the cake.

Alternatively, you can use the play-dough cake and birthday candles to do the same activity. Another approach would be to make a large cake out of colored paper to hang on the wall or an easel. Cut out paper candles that can be attached to the cake with tape squares.

## Making Literacy Connections

Share the following book with children as an opportunity to deepen their understanding of counting and quantity. The literacy extension activity below suggests another play-based experience to invite counting.

**Suggested Book:** *Big Fat Hen* by Keith Baker

### AS YOU READ:

Prompt children to count the illustrations. On each page, the author features two numbers (like 5 and 6) and has included five items and six items in the illustration. Help children discover these quantities in the pictures.

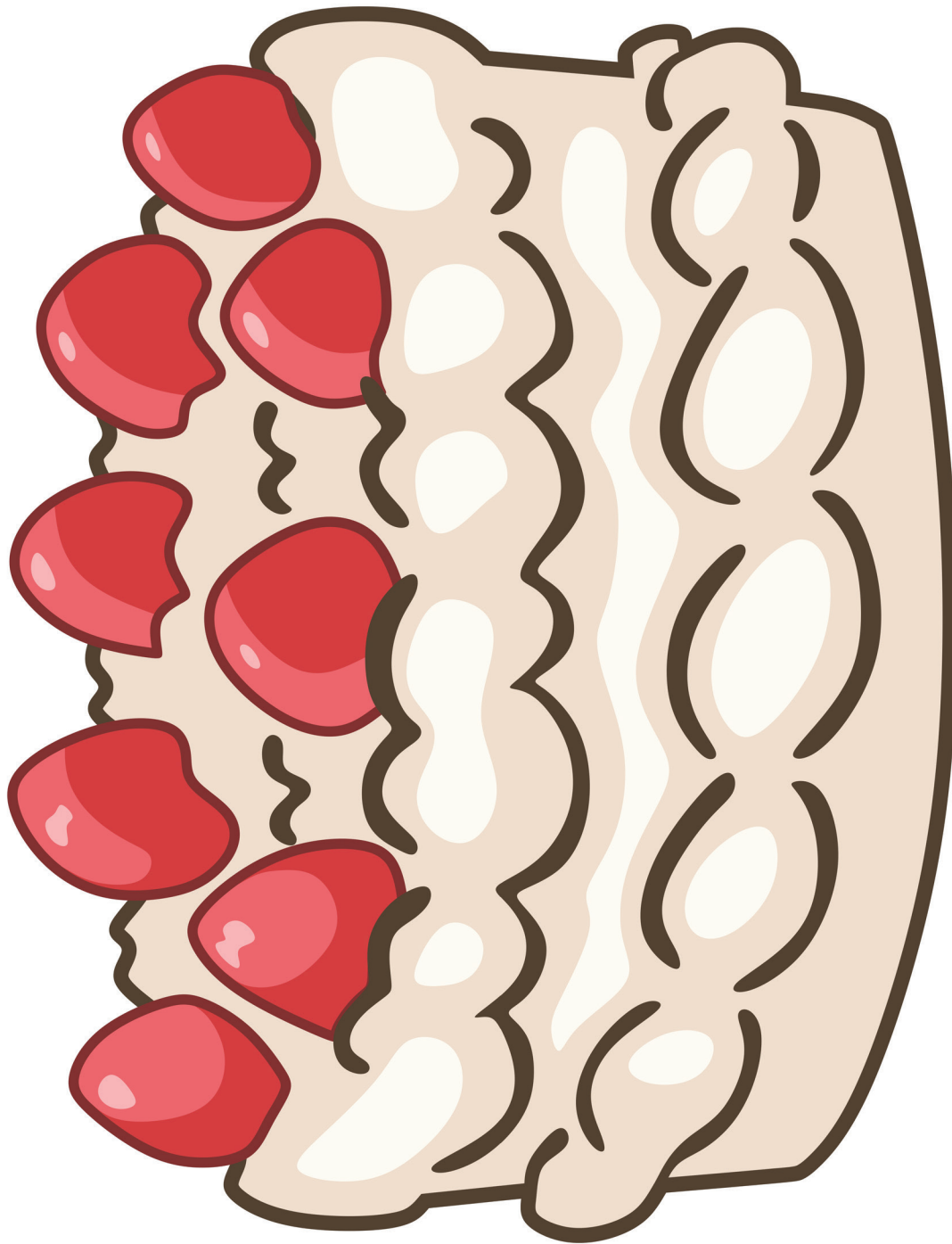
### BUILD ON THE BOOK:

Materials: 10 plastic eggs for every two children. A basket to hold each set of 10 eggs. A piece of colored paper for every two children.

1. Create pairs of children. Give each pair a basket of eggs and a piece of colored paper.
2. Explain: "As we read, we'll count the eggs in the pictures. Then you can count out the same number of eggs from your basket and put them on your paper."
3. As you reach a page that has eggs pictured, ask a helper to count the eggs in the illustration. Then ask children to count out the same number of eggs with their partner.
4. Continue until you get to 10.

Consider placing the book and plastic eggs in a center area so children can engage in math play across the day.

## Handout 1: Birthday Cake



Handout 2: Birthday Candles





## Just for Families

### The Sock Game

This week, use the Sock Game as a way to help your child practice counting *and* have fun with you!

Gather 10 socks. Give your child 5 socks. Keep 5 for yourself.

Tell your child, "Let's play the sock game. I am going to lay down some socks. Your job is to choose the same number of socks and put them next to mine."

For the first round, lay down 2 socks. Remind your child, "Now you find the same number of socks and put them down next to mine."

When your child is done, point to your two socks and count: "1, 2." Then tell your child it's their turn to count.

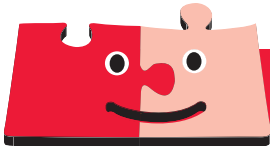
For the next round, choose a different number of socks from 1 to 5.

After you have played a few times, let your child have a turn to tell you how many socks to take out.

If this game is too easy for your child, you can use larger quantities of socks (up to 8-10). If it's too hard, focus on quantities of 1-3.







## Solo para familias

### El juego de los calcetines

¡Esta semana, use el Juego de Calcetines como una forma de ayudar a su hijo a practicar el conteo y divertirse con usted!

Reúna 10 calcetines. Dele a su hijo 5 calcetines. Guarde 5 para usted.

Dígale a su hijo: “Juguemos al juego de los calcetines. Voy a poner unos calcetines sobre el piso. Tu trabajo es elegir el mismo número de calcetines y ponerlos al lado de los míos”.

Para la primera ronda, coloque 2 calcetines. Recuérdele a su hijo: “Ahora busca la misma cantidad de calcetines y pónlos junto a los míos”.

Cuando su hijo haya terminado, señale sus dos calcetines y cuente: “1, 2”. Luego dígle a su hijo que es su turno de contar.

Para la siguiente ronda, elija un número diferente de calcetines del 1 al 5.

Después de haber jugado algunas veces, deje que su hijo tenga el turno para decir cuántos calcetines debe sacar.

Si este juego es demasiado fácil para su hijo, puede usar cantidades mayores de calcetines (hasta 8-10). Si es demasiado difícil, concéntrese en cantidades de 1 a 3.

