A. Welcome and overview (2 minutes)

1. Explain the session plan

Welcome! In this training, you will:

- see how babies can learn about math by exploring which objects fit inside other objects,
- learn that math for babies includes comparing sizes,
- practice “math talk” to use with babies.

Math talk is important to use with babies. You can introduce babies to math words and explain your own math ideas. They may not understand every word, but they will listen and learn.

B. Videos (10 minutes)

1. Introduce FINDING WHAT FITS video

This video starts with a baby fitting her hand inside a plastic cup. The caregiver introduces another object and encourages the baby to see if it fits in the cup. This is based on a Make Connections activity (Community/Building unit, WHAT FITS INSIDE? for Under 2s). When you watch, think about:

How does the caregiver engage the baby in exploring sizes?
2. Watch Finding What Fits

3. Have participants discuss in pairs for 1-2 minutes
   How does the caregiver engage the baby in exploring sizes?

4. Review key points
   The caregiver uses several ways to engage the baby in exploring sizes:
   - She follows the baby’s interests.
   - She describes objects and actions using math words, like inside. She also asks open-ended questions, like, “What happens?”
   - She encourages the baby to touch everything.

5. Introduce Exploring and Describing Shapes video
   - In this video, the caregiver gives the baby a cup and toilet paper tube. As the baby explores the objects, the caregiver describes the shapes. This is based on a Make Connections activity (Community/Building unit, Explore Shapes for Under 2s). When you watch, think about:
     How does the caregiver support the baby’s math learning?
6. Watch Exploring and Describing Shapes

7. Have participants discuss in pairs for 1-2 minutes

   How does the caregiver support the baby’s math learning?

8. Review key points

The caregiver supports the baby’s math learning in several ways:

- As the baby handles the objects at her own pace, the caregiver describes the shapes with math words including round, top, bottom, open, closed.
- The caregiver asks, “What happens?” This open-ended question encourages the baby to watch and think, even though she cannot yet answer in words.
- As the baby watches, the caregiver demonstrates properties of the shapes, for instance, the tube rolls and is open in the middle.

C. Activity: What Fits Inside? (10 minutes)

1. Distribute and introduce Handout 5

   Handout 5A gives ideas for math talk you can use when babies are exploring what fits inside of cups, containers, and boxes. Babies may not understand the words, but they will begin to learn as you talk to them.

   Read the math talk on Handout 5A out loud or ask for volunteers to do so.
You will be coming up with your own ideas for math talk to use with babies.

Read the instructions on Handout 5B out loud, including the math talk checklist.

2. Participants fill out **HANDOUT 5B in pairs**

Show participants the materials to use. As participants work, circulate to help them see if their ideas fit the math talk checklist. Help them revise if needed.

D. Wrap Up (2-5 minutes)

1. Review main points of the session

To review, here are the main points of the session:

- Babies learn about sizes and measurement by exploring which objects fit inside other objects.
- Use math talk to support their learning. Use math words and describe what they are doing.
- You can use everyday things, like plastic cups and paper towel tubes, to help babies build their math ideas.
Help your baby explore:

Let’s see what fits inside the cup.

The ball is too big to fit inside the cup.

Your hand fits inside the cup!

What will happen if I try to put my hand in the cup?

Materials: A few varied balls, blocks, and plastic cups

Math topic: Geometry, measurement

Math vocabulary: Big, inside, small
Math Talk: What Fits Inside?

Choose three objects to use for “What Fits Inside” with a baby. What are the objects? Write your answers:

Write down a math talk comment you could make while the baby is exploring the objects. Your comment should describe what the baby is doing. Check that your idea is math talk. If it is not, revise it.

________________________________________________________________.

MAKE SURE IT IS MATH TALK:

- Does your comment use math vocabulary on the activity sheet, like inside, outside, big, and small?*

  *If not, revise your comment to include math words.*

- Does your comment describe what the baby is doing?

  *If not, revise your comment to describe what the baby is doing.*

* You can also use size words like smaller, smallest, bigger, and biggest.
¿QUÉ CABE ADENTRO?

Materials: Algunas pelotas variadas, cubos para armar y vasos de plástico

Ayude a su bebé a explorar:

Vamos a ver qué cabe dentro del vaso.

La pelota es demasiado grande para caber dentro del vaso.

¡Tu mano cabe dentro del vaso!

¿Qué va a ocurrir si intento poner mi mano dentro del vaso?
Plática matemáticas: ¿Qué cabe adentro?

Escoge tres objetos para usar con un bebé en LA ACTIVIDAD “Qué cabe adentro”. ¿Qué objetos son? Escriba sus respuestas:

Escriba un comentario de Plática matemática que pueda hacer mientras el bebé está explorando los objetos. Su comentario debe describir lo que está haciendo el bebé. Verifique que su idea esté relacionada a la Plática matemática. Si no es así, revisélo.

ASEGÚRESE DE QUE SEA PLÁTICA MATEMÁTICA:

¿Su comentario usa vocabulario matemático en la hoja de actividad, como adentro, afuera, grande y pequeño?

_Si no es así, revise su comentario para incluir palabras de matemáticas._

¿Su comentario describe lo que está haciendo el bebé?

_Si no es así, revise su comentario para describir el patrón._

* También puede usar palabras de tamaño como más pequeño, el más pequeño, más grande y el más grande.