

How Many Puppies?

Children watch as a set of puppies enters a dog house. One more puppy joins them, and children are asked to tell, without counting, how many puppies are inside. Once they have responded, they can confirm how many puppies are in the house by lifting the lid and counting the puppies inside. The activity supports the inclusion principle that when one more object is added to a set, its size increases by one and the next successive number name is used to represent that quantity. The activity is also an introduction to knowing the relationship of one more and two more as an adding-to problem.

Connecting to the CCSSM: K.CC.1, K.CC.2, K.CC.4, K.CC.5, MP.1, MP.2, MP.4, MP.6, MP.7

Materials and Preparation

- Puppy counters or any other animal counters
- Dog house or pet house (in this activity an upside-down shoebox is used, with a hole cut in one side for the door). Cover the door with a flap of fabric to prevent peeking.

Whole Class Introduction

- Introduce the activity by telling the children, “You will be taking care of the puppies in the dog house, so you need to keep track of how many puppies you have. You have to think of how many puppies you will be taking care of.” Put one puppy in the house and ask, “How many puppies are inside?” Lift the dog house to find the puppy.
- Repeat this activity by starting with small quantities of puppies. Add another puppy to the house. Then ask children to predict how many puppies are in the house and to explain how they know. Confirm the number of puppies by lifting the box and counting.

- For a further challenge, put a given number of puppies in the dog house all together without counting. For example, “There are three puppies in the house. One more puppy comes to play. How many puppies are now in the house?” Children are asked to predict and explain prior to lifting the box and counting.

Variations

- While the present activity focuses on number sequence, the puppies in the dog house can also be used to support children’s learning of one less, two more, two less, and other parts-whole relationships.

Snapshots of Conversation

- There was one puppy in the house and the teacher said, “I’m going to have another puppy come and join it. How many puppies are in the house now?”
Akelia: “Two.”
Teacher: “How do you know that?”
Akelia: “Because there was one first, and then two.”
- “There are now five puppies in the house. One more puppy comes to join them. How many puppies are in the house now?”
Hailee: “Six.”
Teacher: “OK, how do you know that?”
Hailee: “Umm . . . after 5 comes 6.”
Edie responded at the same time: “Because five puppies first, plus one.”
The house is lifted, and Hailee arranges the puppies in a row and counts them (see figure 1).





Figure 1. Hailee counts the number of puppies that were in the dog house.

Reference

“Laying the Foundation for Computational Fluency in Early Childhood” by Sharon Griffin.
Teaching Children Mathematics, February, 2003, p. 306-309.