BUNNY EARS

Level: F-2

Learning Objective: Use fingers to model numbers in different ways

Intended Outcome: Students 'trust' the count and can explain their thinking, i.e. they do not need to count all their fingers to represent the number

Instructions:
- Teachers names a number, for example, Show me 6
- Students use their fingers to model the number
- Teacher asks students to explain how they know they are showing that number
- Student replies, "I know 5 and 1 makes 6"
- Teacher prompts students to show the number another way

Variations:
Ask students to work with a partner (or in a group of 3). Students can now work together to model two-digit numbers or model single-digit numbers using more hands

More detailed instructions and background information about this game are available below.

Bunny Ears

The name of this game originates from the bunny ears gesture that people will sometimes place behind another person's head, just as a photo is being taken. The game helps to establish whether students are able to represent a number with their fingers and also looks at the strategy the students is using to represent theis number, i.e. are they counting their fingers one at a time or are they using their prior knowledge. In Matheamatics, the ability to represent and identify numbers, without needing to count all, is known as *trusting the count*. Students in their first year of school may know that they have 5 fingers on each hand and they may even hold up one hand when asked to show 5. The issue for the students is when they are asked to show a different number such as 7. Often, it is interesting to note that a student, who only moments earlier could show 5 fingers without counting, will now count all their fingers to show 7. Such a strategy is evidence that the students does not *trust the count*.

The object of the game, *Bunny Ears,* is for students to represent numbers using their fingers and explain their thinking, i.e. 3 and 3 makes 6. Initially, students are encouraged to hold their hands in front of them so, if needed, they can count their fingers. The challenge with this game is for students to represent the given number without looking at their fingers. Here students may hold their hands behind their back or above their head (like bunny ears).

The ability to *trust the count* and develop a mental image of what a particular number "looks like" is a step that students need to progress through in order to deepen their understanding of numbers. This skill will assist with estimation and counting larger collections. In contrast, students who have a limited ability to *trust the count* will run into issues with addition and subtraction. A lack of understanding in this area will also cause issues when students are learning about making equal groups and arrays, a precursor to developing multiplication and division skills.

For example:

How would students describe (or count) this diagram?
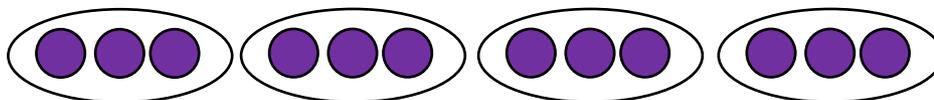
Some students may count all the purple dots and say there are 12. Other students may count the first group (1, 2, 3) and use this information to find the total. Other students, who *trust the count,* may immediately count by threes or recall the facts 4 threes are 12.

Playing games that involve students using their fingers helps to develop the *trust the count* skill. Once students are comfortable with making numbers with their fingers they can move onto other familiar representations of numbers, such as those found on dice, dominoes, tens frames, bundles of 10, dot cards or MAB.

Instructions

The teacher names a number between 0 and 10. The students are asked to show the teacher this number by holding up their fingers. Initially students are allowed to hold their fingers out in front of them.

For example:

Show me 6
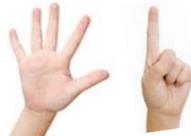
The teacher then asks the student to explain how they now they are showing the correct number. In the above example the student may reply. "Five and one makes six."

The teacher then prompts the students to show another way to represent the same number, for example, 3 and 3 makes 6 or 2 and 4 makes 6.

While students are representing the numbers, it is important that the teacher is checking to see what strategy students are using. Are students counting all? Counting on? Or perhaps students can hold up the correct amount without the need to count. By choosing a variety of numbers and prompting students to explain their thinking each time will help others learn from their strategies.

For example, if a student says they made six from 5 and 1, the teacher could ask "How did you know you had 5 fingers?" Hopefully, the student will say something like, "I know we have 5 fingers on each hand" and then the students will count them off (1, 2, 3, 4, 5).

Although it is only early, it is important that students develop their ability to explain what they are thinking, as well as the strategy they have used. Sharing these ideas with others helps to develop the idea that we can learn from one another.

Once students have shown that they can represent numbers between 0 and 10 have students join with a partner and try to represent numbers between 10 and 20. Again, prompt students to explain their thinking and show numbers another way.

For example:

Show me 12

10 and 2 makes 12   6 and 6 makes 12
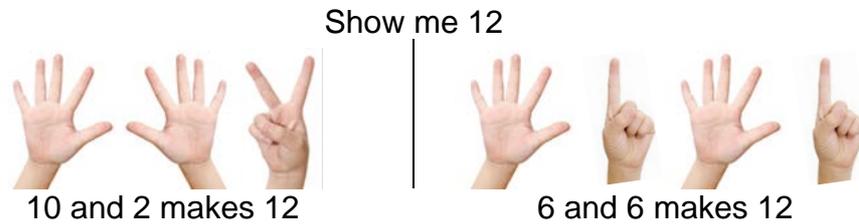
Being able to confidently represent and explain two-digit numbers shows that students can apply their counting knowledge to place value. Being able to partition (or break up) numbers in a variety to ways will also help students with addition and subtraction problems in the future.