

Building Number Sense: Counting, Matching, and Adding Small Groups (0-10)

Materials Needed

- 10-20 small, easily handled objects (e.g., LEGO bricks, dry beans, small toys, counting bears)
 - Index cards or small pieces of paper labeled with the numerals 1 through 10
 - A large piece of paper or whiteboard
 - Markers or crayons
 - One small, opaque cup or bowl (The "Mystery Cover")
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Introduction (Tell Them What We Will Learn)

The Hook: The Treasure Hunt Challenge (5 minutes)

Educator Talk: "Tobias, imagine you are a powerful sorcerer or a master builder! Today, we are going to use the magic of numbers to count our treasures and figure out how to put them together. Numbers help us know if we have enough snacks, enough toys, and even how many jumps we can do! Look at this handful of blocks... Do you know how many treasures I have right now?" (Show a small group of 3 or 4 objects.)

Learning Objectives (What We Will Do)

By the end of this lesson, you will be able to:

1. **Count and Tell:** I can count groups of objects up to 10 and tell exactly how many there are.
2. **Match Up:** I can match the number (the numeral) to the right group of things.
3. **Add Stories:** I can solve simple number stories, like when we put two small groups together.

Success Criteria (How We Know We Are Successful)

We will know we are successful when we can:

- Lay out 7 blocks and correctly say, "There are seven blocks!"
 - Find the card with the number '5' and put it next to a group of five objects.
 - Solve a problem like, "If you have 2 apples and get 3 more, you have 5 apples!"
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Body (Teach It)

Activity 1: Counting Masterclass (I Do - Modeling) (10 minutes)

Goal: Model accurate counting (one-to-one correspondence and cardinality).

Step-by-Step Guidance:

1. **The Touch-and-Say Rule:** The educator places a group of 6 objects on the table. "Watch me very closely, Tobias. When I count, I must touch each object only one time and say one number. If I skip one, my count is wrong!"
2. **Demonstrate:** Slowly touch each object: "One (touch), two (touch), three (touch), four (touch), five (touch), six (touch). There are six."
3. **Cardinality Check:** "The last number I said is the total number in the group. This is the magic number! This whole group is 6."
4. **Matching the Numeral:** Show the index card labeled '6'. "This is the number six. It goes with this group." (Model matching 3-4 different numbers/groups.)

Activity 2: Hidden Treasures and High Fives (We Do - Guided Practice) (15 minutes)

Goal: Practice counting and introduce simple joining/addition scenarios.

Instructions:

1. **Educator Sets:** The educator lays out a group (e.g., 4 objects) and asks Tobias to count them.
2. **The Mystery Cover (Formative Assessment Check):** Use the cup/bowl to cover 2 of the objects. "We had four blocks. Now I hid two blocks. How many blocks are showing?" (This reinforces that the total is the same, even if some are hidden.)
3. **Introduction to Joining (Addition):** Place two small groups separately (Group A: 2 blocks, Group B: 3 blocks).
4. **Educator leads:** "Tobias, let's pretend Group A are red cars and Group B are blue cars. We want to know how many cars we have **all together**. We push them together!" (Physically push the groups together.)
5. **Count the Total:** Count the joined group together. ($2 + 3 = 5$).
6. **Visual Representation:** The educator writes the simple sentence on the whiteboard while saying it: "2 and 3 makes 5." (Use the words 'and' and 'makes' instead of plus and equals for now.)

Activity 3: The Builder's Challenge (You Do - Independent Practice) (15 minutes)

Goal: Independent application of counting, matching, and simple addition.

Step-by-Step Instructions:

1. **Matching Mania:** Spread out the number cards (1-10) on the table. The educator calls out a number (e.g., "Find the number 8!"). Tobias must find the number card and then build a matching group of 8 objects next to it. (*Self-Correction/Formative check: If Tobias struggles, have him point to the card while counting out the objects.*)
2. **Tobias's Number Story:** Present 3 simple real-world addition scenarios (sums up to 5, using manipulatives for support):
 - "You found 3 shiny rocks, and then your dog dug up 1 more rock. How many rocks do you have now?" (Tobias uses the materials to model $3 + 1 = 4$.)
 - "You are eating 4 grapes, and I give you 1 more grape. How many grapes are you eating?" (Tobias counts the total.)
 - "Two toy soldiers are standing guard, and 2 robots join them. How many figures are standing guard?"

Conclusion (Tell Them What We Taught)

Closure and Recap (5 minutes)

Educator Talk: "Wow, Tobias! You are a counting and adding superstar today! We learned that when we count, the last number we say is the most important because it tells us the total. We also learned that 'joining' groups means we are adding them up to get a bigger total."

Learner Recap: Ask Tobias to demonstrate one concept: "Show me a group that is three, and show me the number three. How do you know that group is three?" (Focus on his ability to explain his process.)

Summative Assessment: The Number Master Challenge (5 minutes)

Present one final, complex challenge to assess all three objectives:

Challenge: "We need to make a group of 9. Can you count out 9 blocks? Now, write the addition story that shows how you made the 9, using two small groups (e.g., 4 and 5). Say the story out loud."

- **Success Check 1 (Counting):** Did the learner count exactly 9?
- **Success Check 2 (Addition):** Did the learner combine two groups to reach 9 (e.g., 4 and 5)?
- **Success Check 3 (Matching/Verbalizing):** Did the learner say, "4 and 5 makes 9?"

Next Steps / Reinforcement

For practice later, Tobias can be the "Snack Counter" this week, responsible for counting out small equal portions of snacks for himself and others (e.g., two crackers for each person, making sure he counts to 4 if there are two people).

Differentiation and Adaptability

Scaffolding (For learners needing more support or working in a smaller context like homeschool)

- **Lower Quantity:** Limit all activities and challenges to numbers 0-5 until mastery is achieved.
- **Physical Aids:** Use a number line taped to the table/desk. When counting or adding, physically move a small token along the line to visualize the jumps.
- **Sensory Input:** Use highly tactile objects (e.g., playdough balls, sticky dots) that must be squashed or peeled off the table as they are counted, forcing one-to-one correspondence.

Extension (For advanced learners or classroom settings)

- **Switching Roles:** The learner (Tobias) becomes the "Teacher" and creates three addition stories for the educator/parent to solve, requiring sums up to 10.
- **Missing Parts:** Introduce simple subtraction visually. Lay out 7 blocks, hide 2, and ask: "We started with 7, we ended with 5. How many were hidden?" (Focus on conceptual understanding of subtraction as taking away.)
- **Recording Symbols:** Introduce the standard symbols (+, =). "Can you write '2 + 3 = 5' using the grown-up math symbols?"