

The Tale of the Tens King and the Ones Servant: Introduction to Place Value

Materials Needed

- 30-50 small, identical items (craft sticks, popsicle sticks, LEGO bricks, or counting beads).
- Rubber bands or small pieces of string (for bundling).
- A large piece of paper or cardboard divided into two columns labeled 'Tens' (T) and 'Ones' (O). This is the "Place Value Mat" or the "Two Houses."
- Index cards or paper slips with two-digit numbers (e.g., 12, 25, 30, 41).
- Crayons or colored pencils.

Introduction: The Mystery of the Different Houses

Hook (Tell them what you'll teach)

Educator: H, imagine we have the number one (1) and the number four (4). If I put them together, I make the number fourteen (14). But what if I swap them? Now I have forty-one (41). Why do those numbers sound so different, even though they are made of the same two tiny digits? Today, we are going to learn the secret rule of numbers. It's all about where they live!

Learning Objectives (In student-friendly language)

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

1. Identify the two special places in a number: the Tens House (left) and the Ones House (right).
2. Build any two-digit number (up to 50) using sticks bundled in groups of ten.
3. Explain why the number 23 is very different from the number 32.

Body: The Kingdom of Numbers (Teach It)

I DO: Modeling the Rule (Story and Demonstration)

The Story of the Two Houses:

Educator: Once upon a time, every number lived in a kingdom with two very different houses. The house on the left is the strong, important "Tens House," ruled by the mighty King Ten. The house on the right is the small "Ones House," managed by the helpful Servant One.

The King Ten's Rule: The King Ten is very strict. He only lets groups of TEN live in his house. If you try to bring nine sticks, he says no! If you try to bring eleven, he only takes one perfect bundle of ten, and sends the leftover one next door.

The Servant One's Rule: The Servant One loves leftovers! He can hold any number of single sticks, but only up to nine. The moment he gets ten sticks, he quickly bundles them up and sends them over to the Tens King.

Modeling 1: Building the Number 23

1. **Present the Mat:** Place the T/O mat down.
2. **Model the Tens:** "I need to show the number 23. The first number I see, the 2, lives in the Tens House. That means I need two bundles of ten sticks." (Educator counts out 10 sticks, bundles them, places them under 'T'. Repeats for the second bundle).
3. **Model the Ones:** "The second number I see, the 3, lives in the Ones House. That means I need three single sticks." (Educator places three single sticks under 'O').
4. **Success Criteria Check:** "I have 2 bundles of ten (20) and 3 single sticks (3). Together, that makes 23."

WE DO: Guided Practice (Interactive Bundling)

Activity: The Number Builder Challenge

Instructions: H and the educator will take turns drawing a number card and building the number together on the place value mat.

1. **Build 15:** (Educator guides H step-by-step). "Which house does the 1 belong in? How many sticks do you need to bundle for that Tens House?" (H bundles 10 sticks). "How many single sticks go in the Ones House?" (H places 5 sticks).
2. **Build 30:** (Focus on the zero). "We need three bundles for the Tens House. How many single sticks do we put in the Ones House? Zero! The Servant One is having a relaxing day."
3. **Build 19 and Transition:** (Build 19). "Now, what if we needed to build 20? If we add one more stick to our 9, we have 10 ones. What must happen when the Ones Servant gets 10 sticks?" (H bundles the 10 and moves the new bundle to the Tens House, showing the transition from 19 to 20).

Formative Assessment Check:

- **Question:** "If you have two bundles of ten, how many sticks do you have in total?" (Expected answer: 20).
- **Question:** "Can the Ones House ever hold 10 single sticks?" (Expected answer: No, they must be bundled and moved to the Tens House).

YOU DO: Independent Application (The Secret Agent Assignment)

Activity: Secret Agent Number Mission

Instructions: H is now a Secret Agent assigned to decode numbers. The educator draws a number card (e.g., 42) and says the number aloud. H must independently build the number using the bundles and single sticks on the mat, and then write the number below the correct T/O columns on the paper.

1. H draws/receives 42. (Must show 4 bundles, 2 singles).
2. H draws/receives 35. (Must show 3 bundles, 5 singles).
3. H draws/receives 11. (Must show 1 bundle, 1 single).

Creative Reinforcement (Steiner Element)

Activity: Drawing the Houses

H will draw the two houses (Tens and Ones) on a separate piece of paper. The Tens House should look strong and maybe have ten windows. The Ones House can be smaller and hold the leftover characters.

This kinesthetic drawing reinforces the left/right position and the identity of each column.

Conclusion: Reinforcement and Takeaways (Tell them what you taught)

Recap and Discussion

Educator: Wow, Agent H, you successfully decoded those numbers! Let's think about the mystery we started with: 14 versus 41.

1. "In 14, where does the 1 live?" (Tens House/King). "How much is that worth?" (10).
2. "In 41, where does the 4 live?" (Tens House/King). "How much is that worth?" (40).

Key Takeaway: The position of a digit matters much more than the digit itself! That's why we call it PLACE Value.

Summative Assessment (Demonstration)

Success Criteria: H must correctly model the difference between two transposed numbers.

1. **Challenge:** "Using the sticks, show me the number 21." (H builds 2 bundles and 1 single).
2. **Challenge:** "Now, show me the number 12." (H rebuilds 1 bundle and 2 singles).
3. **Verbal Check:** H must verbally explain: "21 is bigger because the 2 is in the Tens spot, which means twenty."

Differentiation and Adaptability

Scaffolding (For learners needing support)

- **Color Coding:** Use two different colors of sticks/LEGOs—one color only for Tens bundles, one color only for Ones singles.
- **Number Range:** Limit all numbers in the 'You Do' section to the teens (11-19) until the bundling concept is mastered.
- **Verbal Prompts:** Use continuous prompts like, "How many groups of ten do you need?" and "How many loose ones are left?"

Extension (For advanced learners)

- **Reverse Encoding:** The educator secretly builds a random number (e.g., 5 bundles and 3 singles) and H must quickly count the total and write the corresponding number (53).
 - **Introducing the Hundreds:** Introduce a third, even bigger house on the far left: The Hundreds Palace. Discuss how 10 bundles of ten must be bundled into one big group and moved to the Hundreds Palace (100).
 - **Estimation Game:** Show H a pile of 35-45 sticks and ask them to estimate how many bundles of ten they think they can make before counting.
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