

Bundles of Beans: A Place Value Lesson

1st–2nd Grade

Objectives

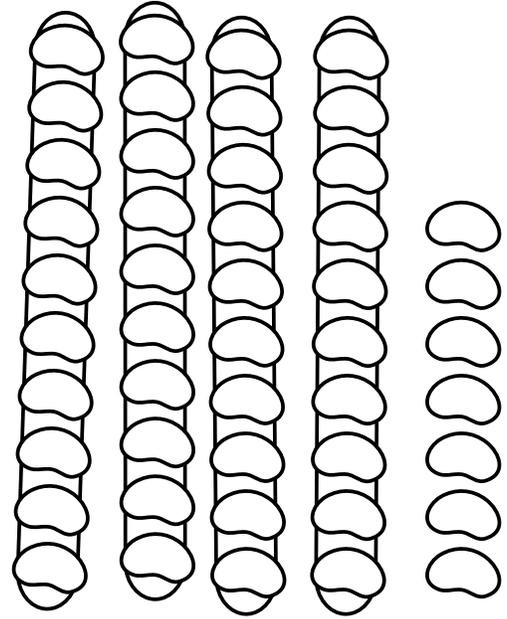
- Students will understand place value.
- Students will explore the relationship between ones, tens, and hundreds.

Materials Needed

- Place value work mat
- Spinner template
- Large dried beans (over 100 for each student)
- Craft Sticks (10 for each student)
- Glue
- Paper clips
- Pencils

Introduction

1. On chart paper or a chalkboard, draw a chart with three columns. Label the columns from left to right: *hundreds*, *tens*, and *ones*.
2. Hold up a bean and ask students, "How many beans do I have?" Then write the numeral 1 in the ones column on your chart.
3. Say, "If I add two more beans, how many will I have?" Write the numeral 3 beneath the 1 in the ones column. Explain, "When we have a number that is less than 10, we can show it by writing it in the ones column."
4. Then ask, "But what if I have 14 beans? Each of these columns can only hold one numeral. So how can I show 14 on my chart?" Write a 1 in the tens column and a 4 in the ones column. Reinforce the concept by pointing to each numeral and saying, "This means I have one ten and four ones—14."



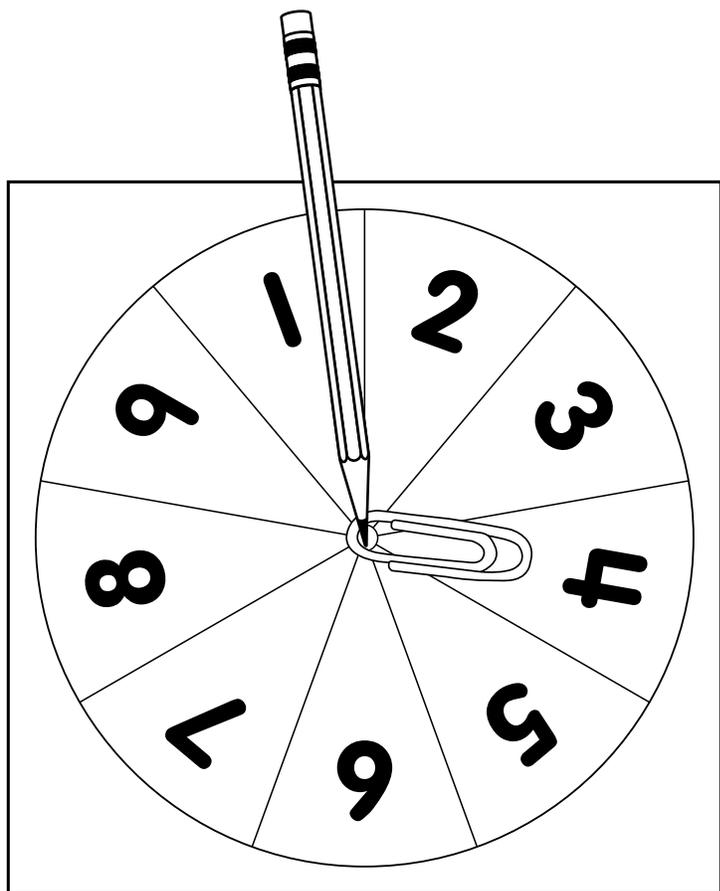
Procedure

1. Give each student 100 beans, 10 craft sticks, and glue. Explain that each bean is a "one," so 10 beans together is a "ten."
2. Have students count out 10 beans for each craft stick. Instruct students to glue exactly 10 beans to each stick so that it represents one "ten."
3. As students work, ask volunteers to use their beans to show the number 20, 40, and so on.
4. Once students have completed all 10 sticks, give them nine extra beans to use as "ones."
5. Once the glue dries, give each student a place value work mat and prompt them to build numbers on the mat using their sticks and beans. For example, say, "Use your sticks and beans to show the number 32." Check to see that students put three sticks in the tens column and two beans in the ones column.
6. Continue until students demonstrate that they understand how to use their manipulatives to show numbers.

Independent Practice

1. Divide students into pairs to play a place value game using their mats and manipulatives. Provide extra beans so students have more than nine "ones."

2. Give each pair a spinner template, paper clip, and pencil. Show students how to use the paper clip as the arrow for the spinner: Slide the paper clip onto the pencil. Hold the pencil upright with the tip in the center of the spinner. Then flick the paper clip to spin it around the pencil.
3. Have the first player spin and build the number on her mat. Instruct the second player to do the same.
4. On each subsequent turn, have students spin and add that number of beans to their mat. Once they have 10 beans in the ones column, they can trade the beans for one stick. (For example, if a student has 5 beans in the ones column and he spins a 9, then he trades 10 beans for a stick and keeps the remaining 4 beans.) The first player to get to 100 (by collecting 10 craft sticks) wins!



Place Value Work Mat

HUNDREDS	TENS	ONES

Spinner

