

Nesting Word Problems

Overview Students will first go outside pretending to be birds to collect the types of materials birds look for to build their nests. Then they will practice the work of scientists counting the materials they have collected and learning to solve word problems.

**Lesson
Planner**

Time Required	30 minutes
Key Concepts/Terms	Counting to 30, Solving word problems
Prerequisites	Counting to 10
Setting	10 minutes outside, remainder of the lesson is inside

Objectives The students will collect and count nesting materials in order to practice solving word problems.

Standards MDSC Kindergarten Math Standards
6.A.1. Apply knowledge of whole numbers and place value to count to 31.
7.A.1. Apply a variety of concepts, processes, and skills to solve problems.

Materials Required

- Bags to collect nesting materials in.
- Worksheets to record answers to the word problems. These should also be displayed on the front board.

Background Information Students have been playing numbers games to learn to count to 30. Today they will be introduced to word problems.

The objectives that follow standard 7.A.1 are:

1. Identify the question in the problem
2. Decide if enough information is present to solve the problem
3. Make a plan to solve a problem
4. Apply a strategy, i.e., draw a picture, guess and check, finding a pattern, writing an equation
5. Select a strategy, i.e., draw a picture, guess and check, finding

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- a pattern, writing an equation
6. Identify alternative ways to solve a problem
 7. Show that a problem might have multiple solutions or no solution
 8. Extend the solution of a problem to a new problem situation

Procedure

Follow the steps in the table below to conduct the activity. **Sentences in bold are suggestions for what teachers might say to students.** *Items in italics are possible teacher answers to questions.*

Phase	Step	Action
Engage	1	<u>Bird Nests (4 minutes)</u> Show students examples of birds' nests. Explain that some scientists, when they study birds' nests, will count how many leaves or twigs or feathers they find in the nests to learn about how birds construct the nests.
	2	<u>Set the Stage (1 minute)</u> Today, we are going to be birds and scientists. First, we are going to go outside and collect the types of natural materials that birds might use to construct their nests. Then, we are going to practice counting the materials just like scientists do!
Explore	3	<u>Establish rules and expectations (5 minutes)</u> Go over the rules and expectations for learning outside. A poster may be created to be kept in the classroom for future outdoor lessons. Have in mind some expectations for outdoor learning specific to your schoolyard that you want to be sure students include. For instance, <ul style="list-style-type: none"> • <i>Regular school rules still apply (respect each other, listen to the speaker, follow directions, etc.)</i> • <i>No yelling, screaming, tapping on/waving into windows that will disrupt class learning inside the school building.</i> • <i>"Look, learn, and let go" when you see insects.</i>

	4	<u>Outdoor Time (10 minutes)</u> Students should collect the types of materials that birds might use to build their nests. They can collect these and put them into bags. Give students clear indications as their time runs out that they need to wrap up.
Explain	5	<u>Word Problem (5 minutes)</u> Present students with a word problem. Guide students to solve the problem using the following steps and their nesting materials: 1. What's the question? 2. Make a plan (use nest materials!) 3. Are there other ways to solve the problem?
Elaborate	6	<u>More Word Problems (5 minutes)</u> Provide students with additional word problems to solve with their nest materials.
	7	<u>Optional follow-up questions to answer</u> How many twigs do we have as a class? How many leaves? Which do we have more of? How many more? Etc.
Evaluate	8	Collect students' work. Check for accuracy and understanding.

Vocabulary

Understanding of the following terms is required in this activity.

Term	Definition
Word problem	A math question that you have to read to solve.
Solve	To find an answer to a problem.
Collect	To gather, or get



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Bird Nest Word Problems

Directions: Solve the following word problems. Write or draw your answers.

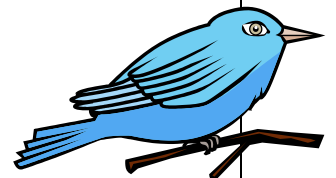
1. A blue jay is adding sticks to her nest. She wants to add 7 sticks total. What is a combination of sticks that she can use to make 7?



2. One cardinal adds 4 pieces of bark to her nest. Another cardinal adds 6. What is the difference between these two numbers of bark?



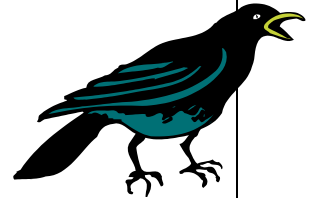
3. A bluebird collects 10 pieces of grass in its beak to bring back to its nest. How can we count to 10 other than counting by ones?



4. A red-tailed hawk adds 8 pine needles to her nest. How many will the hawk have when she collects 2 more?



5. A crow finds 9 feathers to add to her nest. What are three numbers larger than 9?



6. One goose collects 3 pieces of moss for her nest. Another goose collects 8 pieces of moss. What numbers are between 3 and 8?

