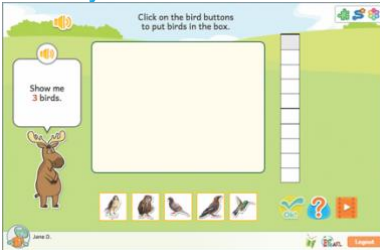


COUNT, STEP 4

Lesson Plan: Number Concept, Count, Step 4

Activity Screen Shot



Theme Host: Chuck



Animal Friend: Hawk



OVERVIEW

This activity reverses the process of the three previous activities. The intent is to help students to understand that given any small number arithmetic task, they can concretize the task by translating it into a task involving real objects.

PRINCIPAL LEARNING GOAL(S)

- Students associate a numeral with a mental image of a set of objects
- Reinforce the concept of number as a count of objects

PREREQUISITE KNOWLEDGE AND SKILLS

- Used the counter to record a count in the previous step
- Had some exposure to the numerals 1 to 9

RESOURCES NEEDED

- Lego Blocks
- Paper and pencils for students

POTENTIAL DIFFICULTIES

- Some students may not as yet have made a solid connection between a particular numeral and the number that it represents (either as objects in the given set or filled cells in the counter). Direct such students to note the briefly displayed numeral beside the counter as shown when a bird is added/removed from the picture.
- Some students may misunderstand the task. Suggest that such students replay the demo and/or click on the helping hand for further instruction.

WARM UP ~ 3-5 MINUTES

Build a tower of large Lego blocks at the front of the class, saying "I am thinking of a number between 1 and 9, and this tower helps me to think of that number". Ask students to write down the numeral that the tower represents and then hold up their written answers.

MAIN ACTIVITY ~ 20 MINUTES

Students are given a numeral and asked to generate a set of that many birds.

CONSOLIDATION ~15 MINUTES

To help students consolidate their new knowledge and make connections to prior learning, allow time for subsequent discussion. The questions below raise important issues:

- 1) *Did you always click on the same bird or did you click on different birds?*

This question may create a debate among the students and it is important to listen to students' conceptions. Many students may believe that you need to click on the same bird all of the time. If this is the case, the teacher may wish to project and do the activity, first using this strategy, and then clicking on several different birds for the second puzzle piece problem to show that both answers were correct. The point that is being made is that students must understand what it is we are counting. For example, are we claiming that we have a set of 3 owls, or a set of 3 birds? If we are claiming set of 3 owls, then we must click on owls only, but if we are claiming 3 birds, then we can click on any three birds, all the same or all different, whatever we like. Also, while typically we are asked to count all objects in a set, regardless of colour, size, type of object, etc., sometimes we may be asked more specific questions, so it is important to pay attention to what the question is. If some students seem confused, the teacher can illustrate by using a collection of say large geometric objects (circles, triangles, squares, rectangles, etc.) and ask first how many objects there are in total, and then more specific questions such as how many circles, how many triangles, etc.

- 2) *What strategy did you use to put the correct number of birds in the meadow?*

Hopefully a few students will have used either or both of the two following strategies: counting aloud as they clicked on a bird so that ultimately they arrived at the required number; watching the counter because each time a bird was added (or removed) the number of coloured cells changed and the numeral expressing the number of coloured cells displayed momentarily.

