COUNT, STEP 5

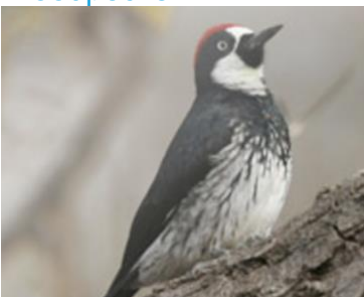## Lesson Plan: Number Concept, Count, Step 5

Activity Screen Shot

Theme Host: Chuck

Animal Friend: Acorn Woodpecker

OVERVIEW

In this step students are asked to move directly from a given set of objects (1 – 9 owls) to the numeral representing that number of objects, reversing the process of the previous step.

PRINCIPAL LEARNING GOAL(S)

- Subitize a larger number of objects
- Reinforce the concept of number as a count of objects
- Reinforce association between numerals and counts of objects

PREREQUISITE KNOWLEDGE AND SKILLS

- Experienced the concept of number as a count of objects
- Practiced associating each numeral with the number that it represents as a count of objects

RESOURCES NEEDED

- A stack of numeral cards, 1 to 9, for each student (Appendix 1)
- A set of slides used during warm up activity (Appendix 2)

POTENTIAL DIFFICULTIES

- Some students may have difficulty counting in their heads or subitizing a larger number of objects. You may suggest the following strategy: first, identify a smaller subset of objects whose count you know at a glance and then count the remaining objects, maybe using fingers to track the counting.
- Some students may not yet have made a solid connection between the numbers said aloud during counting and the corresponding written numerals. If this appears to be the problem, then suggest that such students repeat Step 3, counting aloud as they do it.

WARM UP   ~ 3-5 MINUTES

Most, if not all, six year olds can subitize sets of 1 - 4 objects. Display initial slides (Appendix 2) in which a subset of four objects differs from other objects in colour. Follow with a slide where all objects have the same colour. Students should count up from four, reach a total, and then display the appropriate numeral card (Appendix 1).

MAIN ACTIVITY   ~ 20 MINUTES

Students are shown a picture of a set of owls and asked to click on the number corresponding to the total number of owls.

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) *How did you figure out the number of owls in each set?*
   This question may create a debate among the students and it is important to listen to students' conceptions. Listen in particular for descriptions of organization of the order in which owls were counted, use of fingers to keep track, or use of pencil and paper to draw /// to keep track. All of these are useful methods. Some students may state that they just look at the set of owls and can tell how many there are. This is called subitizing and young children can often learn to spot the number of objects in a set, for numbers up to about 5. It would be interesting to note if any student used the method that was presented in the warm up activity.

2) *If ELM used a different number bar each time you did a different problem how would it affect you?*
   (Display one or more different number bars as you ask this.)
   You want your students to become conscious of the logical arrangement of the numbers in the number bar, in increasing order from left to right, as an early introduction to the concept of the number line, where number represents distance from a fixed starting point (called the origin and labelled with 0). In English and French classes students are taught to read left to right across a page so this arrangement of the number bar/line is easily seen as a simple extension of how one reads the alphabet or sentences. There are countries/cultures in the world that do not use left to right reading systems, e.g., China, Israel, etc. To open students to a discussion of the logic of the arrangement of the number bar/line, display to students one or more different versions (project Appendix 3 or just draw them on the board). The goal is to have students recognize the shared convention of left to right increasing order, and how this facilitates solving problems that involve number bars/lines.

APPENDIX 1

0	1
2	3

4	5
6	7

8	9
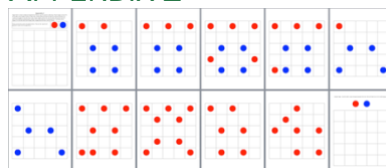
APPENDIX 2

APPENDIX 3

Appendix 3

1	2	3	4	5	6	7	8	9
3	7	1	9	6	8	5	4	2
9	5	2	4	7	6	8	1	3
6	1	4	8	3	9	5	2	7