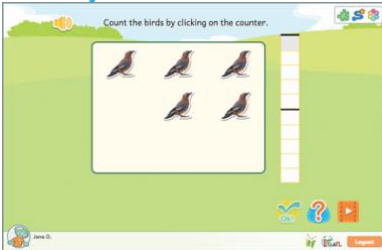


COUNT, STEP 2

Lesson Plan: Number Concept, Count, Step 2

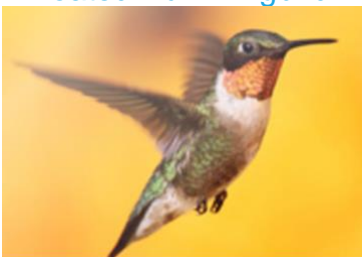
Activity Screen Shot



Theme Host: Chuck



Animal Friend: Ruby-Throated Hummingbird



OVERVIEW

Students are asked to mentally count objects in a set and record the count directly in a counting frame or “counter”.

PRINCIPAL LEARNING GOAL(S)

- Reinforce the mental link between an image of a set of objects and the number of objects as a count
- Develop strategies for counting without physical manipulation of objects
- Improve student ability to subitize

PREREQUISITE KNOWLEDGE AND SKILLS

- Practiced the act of counting physical objects
- Seen ELM record a count in the previous step using coloured cells of a “counter”

RESOURCES NEEDED

- Lego Blocks

POTENTIAL DIFFICULTIES

- Some students may still have difficulty with the software interface. Using the demo should help.
- Some students may have difficulty coordinating the process of counting the birds with the process of counting/marking cells in the counter. See “Consolidation” below for help with this.
- Some students may already have a more advanced understanding of numbers (count all birds and click on directly on the correct counter cell). Change such students’ plans, reducing repetitions and/or engage them in “Extra Activities” (see Teacher Resources).

WARM UP ~ 3-5 MINUTES

Show a large model of a counter (Appendix 1) and a small pile (1 - 9) of (Lego) blocks, each smaller than a counter cell. Ask students: “how many blocks?” When there is a consensus, invite a student to place each block on a counter cell, starting from the bottom. Ask for a count of blocks/cells, one by one, as 1, 2, 3, etc. Repeat until students link the number of objects and filled counter cells.

MAIN ACTIVITY ~ 20 MINUTES

Students are shown a picture of up to 9 birds and asked to count by clicking on a counter. When the student believes all birds have been counted, the student must click on the OK icon.

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 do you know when you have counted all the birds?*
Students will possibly talk about the strategies that they used to do the activity. In particular, since they cannot click on the birds and see a tick to mark that they have counted a bird, how do they know when they have counted all the birds? Some may have used an organizational strategy (left to right, top to bottom, just like reading) or subitizing. You may ask these students whether they had to correct errors. Some students may be more random in the sequence of birds counted and are likely to make more frequent errors. These students may learn from their peers.
- 2) *Does it matter in which order you click on cells in the counting frame? Can you first click on the third cell up from the bottom and then on the bottom cell? What happens if you do this?*
Some students are likely to point out that clicking on the counter is different from clicking on the birds in Step 1. In the counter, if you want to click on one cell at a time you must start from the bottom cell and count upwards, where in Step 1, one could click on the birds in any order. Ask if any student remembers how the counter worked (automatically) in Step 1, namely starting at the bottom cell and moving upwards one cell at a time. Make the analogy to using /// when recording a count with a pencil on paper.

APPENDIX 1 FOR WARM UP

Appendix 1

