## 110 Chart Puzzle

Strand: Number and Number Sense
Topic: Counting and writing numerals from 0 to 110
Primary SOL:
1.1 The student will
a) count forward orally to 110 , starting at any number between 1110; and
b) write the numerals 0 to 110 in sequence and out of sequence.

Related SOL: $\quad 1.1 \mathrm{c}, 1.1 \mathrm{~d}, 1.5 \mathrm{a}$

## Materials

- 110 chart
- 110 chart recording sheet
- Pencils
- Overhead projector or document camera


## Vocabulary

count, counting on, counting back, more, less, counting words, numerals

## Student/Teacher Actions: What should students be doing? What should teachers be doing?

1. Review the number patterns on the 110 chart that you have been discussing with students. Ask, "What patterns do you see on the chart?" Point to a row and ask what students notice. Point to a column and ask what students notice. "What else do you see?"
2. Explain that you will be giving students a part of the 110 chart that has been cut out from the whole. Show the recording sheet. Students need to decide what numbers could go on the puzzle piece cut from the chart.
3. Remove the completed 110 chart from view so that students must use the patterns they discussed to help them. Allow students to work with a partner or small group to complete the task. As the groups work, watch for groups that are having difficulty getting started. Ask if they remember any of the numbers from the chart. If necessary, show them the 110 chart again. Once they have placed one number, then ask, "What number do you think would have to go here (point to a spot)? Why?" As you interact with other groups, ask students to explain how they decided which numbers to put on the puzzle piece.
4. Have small groups/sets of partners share their 110 chart piece with another group. "What do you notice about the other group's puzzle piece? Did they use the same numbers? Do the numbers on the piece make sense? Why or why not?"
5. Pull the groups together to discuss several of the puzzle pieces. "What number did the group put first? How did you figure out what number to write next? Do the numbers on the puzzle piece make sense? Why or why not?"

## Assessment

- Questions
- What patterns do you see on the 110 chart?
- What do you notice about the rows?
- What do you notice about the columns?
- How did you decide what numbers to place on the 110 chart puzzle piece?
- What number did you choose first?
- How did you figure out which number to write next?
- Do the numbers on the puzzle piece make sense? Why or why not?
- Journal/writing prompts
- What number would be under 35 on the 110 chart? How do you know?
- What number would be to the left of 105 on the 110 chart? How do you know?
- What are all of the numbers that would be in the row that starts with 71?
- Have students draw a blank $2 \times 2$ grid in their journal to represent a 110 chart puzzle. Put one number in the grid and ask students to fill in the other numbers.
- Other Assessments
- Give students a blank 110 chart and ask students to fill in one row and one column.


## Extensions and Connections (for all students)

- Give students one number to place on the puzzle piece and have them deduce the other numbers. If you laminate the puzzle piece or place it in a plastic sleeve and provide wipe off markers, this could become a daily warmup.
- Copy a 110 chart with pre-written numbers on cardstock and laminate. Cut the Hundred chart into pieces and have students put the pieces together like a puzzle.
- Cover numbers on a 110 chart and have students decide which numbers are missing and write them on the chart.


## Strategies for Differentiation

- Give a more abstract puzzle piece to students in need of more challenge (e.g., $3 \times 3$ puzzle piece, puzzle piece that resembles a staircase).
- Provide a completed 110 chart which can be used for reference for students who need more support. As they find numbers on the chart to place in their puzzle, ask them to tell you how each number looks the same or different from the other numbers in the puzzle.
- Record the thinking for those students who have difficulty expressing themselves on paper.


## Note: The following pages are intended for classroom use for students as a visual aid to learning.

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## 110 Chart

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |

## 110 Chart Puzzle

Here is a piece of a 110 chart. Fill in the missing numbers that could go on the puzzle piece.


How did you know which numbers to put on the chart? Why did you place those numbers on the chart?

