Children create their own number patterns and reinforce their understanding of the concept of patterns.

What You Need

- Paper
- Pencils
- Cuisenaire Rods or interlocking cubes (optional)
- Colored pencils (optional)
- Graph paper (optional)

What to Do

1. Discuss with children what a pattern is. Remind them that patterns can be found in many places, including numbers. Ask children to name some number patterns they know. If necessary, remind them that counting by twos, fives, or tens is using number patterns.

2. Write a number pattern on the board that includes a number that does not fit the pattern, such as 4, 6, 8, 11, 12, 14. Ask children if there is an “unexpected guest” in this pattern (11) and, if so, can they find it? Repeat the process with a few more patterns, including some that do not include an “unexpected guest.”

3. Tell children to write three of their own number patterns on a piece of paper. Encourage them to be as creative as they can. For example, their patterns might include odd numbers that end in 3, or all the numbers between 1 and 50 that end in 8. Tell children that their patterns should include at least five numbers that fit the pattern and one “unexpected guest.”

4. Then have children work with partners or in groups to find the “unexpected guests” in one another’s patterns.

Teaching Options

- You may want to have children create patterns with interlocking cubes, Cuisenaire Rods, or other manipulatives, inserting an “unexpected guest” each time.
- You can also have children create patterns on graph paper using colored pencils to fill in boxes, or have children draw and color shapes in patterns on plain paper.