Pattern Generation and Analysis

Today's Standard

4.OA.C5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

Real-World Applications for this Standard

Predicting population growth trends; Designing tessellations in art; Scheduling tasks in project management; Modeling financial savings plans; Understanding biological sequences

Today I Learned

Today, we learned how to make and understand patterns in numbers and shapes by following a rule. For example, if we start with 1 and keep adding 3, we get 1, 4, 7, 10, and so on. We also noticed some cool things about the pattern, like how the numbers switch between odd and even.

Common Stumbling Blocks

Sometimes, kids think patterns always follow a simple adding rule, but they can also involve subtracting or multiplying. Another tricky part is realizing that not all features of the pattern are told by the rule. We have to look closely to find them.

Quiz Me

- What is a pattern?
- What happens if we start with 1 and add 3 each time?
- Can patterns involve subtracting too?
- Why do numbers in the 'Add 3' pattern switch between odd and even?
- What should we do to find hidden features in a pattern?

Help Me

Patterns are everywhere! Think about how you line up your toys or the way tiles are arranged on the floor. Making patterns helps us understand and predict what comes next, like knowing what comes after 1, 4, 7, and

10 if we keep adding 3.