"We want to see what you know about some different things like patterns and counting. I might make a recording of what we do so I can look at it later. Will you answer some questions and play some games with me?"
Early Patterning Assessment (EPA)

Growing Patterns
“Find the missing group of stars [gesture to the response options] that goes in this pattern [sweeping gesture from the left bottom to the right bottom of the pattern]”.

If child is confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]

If correct: “That’s right! The group of 4 stars goes here because this growing pattern goes 1 star, 2 stars, 3 stars, 4 stars, 5 stars.” [point to each line of stars as you say them] This pattern is getting bigger, but you will also see some patterns that get smaller.

If incorrect: “That’s not quite right. The group of 4 stars [point to correct answer] goes here because this growing pattern goes 1 star, 2 stars, 3 stars, 4 stars, 5 stars.” [point to each line of stars as you say them]. This pattern is getting bigger, but you will also see some patterns that get smaller.
1. **Missing Add 1 with objects**

Missing: “Find the missing group of apples [gesture to the response options] that goes in this pattern [sweeping gesture across the pattern from left to right at the bottom]”.

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
2. **Missing Subtract 1 with numerals**

Missing: “Find the missing number [gesture to the response options] that goes in this pattern [sweeping gesture across the pattern from left to right at the bottom].”

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the blank” [point to blank spot]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
3. **Missing Add 2 with numerals**

Missing: “Find the missing number [gesture to the response options] that goes in this pattern [sweeping gesture across the pattern from left to right at the bottom].”

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the blank” [point to blank spot]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
4. Missing Subtract 2 with objects

Missing: “Find the missing group of cubes [gesture to the response options] that goes in this pattern [sweeping gesture across the pattern from left to right at the bottom]”

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
5. **Missing Subtract 1 with numerals**

Missing: “Find the missing number [gesture to the response options] that goes in this pattern [sweeping gesture across the pattern from left to right at the bottom].”

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the blank” [point to blank spot]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
6. **Extend Add 1 with objects**

Extend: “What comes next in this pattern?” [sweeping gesture from the left bottom to the right bottom of the pattern then place response options in front of child]

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
7. **Extend Subtract 1 with numerals**

Extend: “What comes next in this pattern?” [sweeping gesture from the left bottom to the right bottom of the pattern then place response options in front of child]

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the blank” [point to blank spot]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
8. Extend Add 2 with numerals

Extend: “What comes next in this pattern?” [sweeping gesture from the left bottom to the right bottom of the pattern then place response options in front of child]

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the blank” [point to blank spot]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
9. **Extend Subtract 2 with objects**

Extend: “What comes next in this pattern? [sweeping gesture from the left bottom to the right bottom of the pattern then place response options in front of child]

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
10. **Extend Add 2 with numerals**

Extend: “What comes next in this pattern? [sweeping gesture from the left bottom to the right bottom of the pattern then place response options in front of child]

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]

If still confused or students asks you if they’re correct say: “Just give me your best guess”
DEMO ITEM

Identify Pattern Unit

“Look at this pattern. [sweeping gesture from the left bottom to the right bottom of the pattern] This is a growing pattern because it grows by 2 stars each time [point to each individual line of stars] (grows by 2 stars in each step) “Now it’s your turn”
11. **Identify Pattern Unit Add 1 with objects**

   “Tell me how this pattern grows” [sweeping gesture from the left bottom to the right bottom of the pattern]

   If child provides a numeric answer, score 1

   If child provides an ambiguous answer, say: “Can you tell me more?”

   If child doesn’t respond or looks confused say: “Just give me your best guess”
12. Identify Pattern Unit Subtract 2 with objects

“Tell me how this pattern grows” [sweeping gesture from the left bottom to the right bottom of the pattern]

If child provides a numeric answer, score 1

If child provides an ambiguous answer, say: “Can you tell me more?”

If child doesn’t respond or looks confused say: “Just give me your best guess”
13. Identify Pattern Unit Add 2 with numerals

“Tell me how this pattern grows” [sweeping gesture from the left bottom to the right bottom of the pattern]

If child provides a numeric answer, score 1

If child provides an ambiguous answer, say: “Can you tell me more?”

If child doesn’t respond or looks confused say: “Just give me your best guess”
14. **Identify Pattern Unit subtract 1 with numerals**

“Tell me how this pattern grows” [sweeping gesture from the left bottom to the right bottom of the pattern]

If child provides a numeric answer, score 1

If child provides an ambiguous answer, say: “Can you tell me more?”

If child doesn’t respond or looks confused say: “Just give me your best guess”
** 2 MIN BREAK: stand up with the child and do some stretches, play a short game of simon says, or any quick body movement activity before moving on to repeating patterns

Repeating Patterns
PRACTICE ITEM - Missing AB

“What is missing in the pattern? [Gesture to the box on the right of the pattern] Use one of these [Gesture to the response option pictures].

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]

If correct: “That’s right! The sun is missing because this repeating pattern goes: sun, umbrella, sun, umbrella, sun, umbrella” [point to each item in the pattern as you name them]

If incorrect: “That’s not quite right, [remove their answer and place the sun in the blank] the sun is missing because this repeating pattern goes: sun, umbrella, sun, umbrella, sun, umbrella” [point to each item in the pattern as you name them]
**15 & 16 Missing items**

15 - Missing Item AB: “What is missing in the pattern? [sweeping gesture across the pattern] “Use one of these beads” [gesture to the response options]

16 - Missing item ABB: “What is missing in the pattern? [sweeping gesture across the pattern] “Use one of these beads” [gesture to the response options]

if child looks confused or unsure say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]
17 & 18 Missing Items

17- Missing item ABC: “What is missing in the pattern? [sweeping gesture across the pattern] “Use one of these beads” [gesture to the response options]

18- Missing item ABCD: “What is missing in the pattern? [sweeping gesture across the pattern] “Use one of these beads” [gesture to the response options]

if child looks confused or unsure say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]
19. **Extend AB item:**

Extend: “What comes next in the pattern?” [Gesture to the circles on the right of the pattern]. “Use one of these groups of M&M’s” [gesture to the response options]

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]
20. Extend AABB item:

Extend: “What comes next in the pattern?” [Gesture to the circles on the right of the pattern]. “Use one of these groups of M&M’s” [gesture to the response options]

If child doesn’t respond or looks confused say “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]
21. **Extend multiple choice**

ABCC item: “What comes next in the pattern?” [Gesture to the right of the pattern]. “Use one of these groups of crayons” [gesture to the response options]

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]
22. Extend ABCD item:

“What comes next in the pattern?” [Gesture to the right of the pattern]. “Use one of these groups of shapes” [gesture to the response options]

If child doesn’t respond or looks confused say: “Choose one of these [gesture to response items] to show me what goes in the box” [point to blank box]
23. **Abstract AAB item**

“I made a pattern with these pictures. [Gesture to model pattern.] “Which of these patterns below is the same kind of pattern as the one I made, but with different pictures?” [Gesture to each pattern separately]

If child doesn’t respond or looks confused say: “Choose one of these” [point to 3 response options] “to show me which is the same kind of pattern as the one I made” [point to blank box]
24. Abstract ABBB Item

“I made a pattern with these pictures. [Gesture to model pattern.] “Which of these patterns below is the same kind of pattern as the one I made, but with different pictures?” [Gesture to each pattern separately]

If child doesn’t respond or looks confused say: “Choose one of these” [point to 3 response options] “to show me which is the same kind of pattern as the one I made” [point to blank box]
25. **Abstract ABC:**

“I made a pattern with these pictures. [Gesture to model pattern.] “Which of these patterns below is the same kind of pattern as the one I made, but with different pictures?” [Gesture to each pattern separately]

If child doesn’t respond or looks confused say: “Choose one of these” [point to 3 response options] “to show me which is the same kind of pattern as the one I made” [point to blank box]
26. Abstract ABCD item:

“I made a pattern with these pictures. [Gesture to model pattern.] “Which of these patterns below is the same kind of pattern as the one I made, but with different pictures?” [Gesture to each pattern separately]

If child doesn’t respond or looks confused say: “Choose one of these” [point to 3 response options] “to show me which is the same kind of pattern as the one I made” [point to blank box]
27. Identify Pattern

“Help me decide if these are patterns.

Practice item: “Is this a pattern?” [while pointing to row of red and yellow boxes]
  If correct: “That’s right! This is not a pattern because there is no part that repeats.”
  If incorrect: “That’s not quite right. This is not a pattern because there is no part that repeats.”

Test items: only showing one at a time, ask “Is this a pattern?” [while gesturing across the whole pattern]
If child doesn’t respond or looks confused say “Please tell me yes or no if you think this is a pattern”
“Look at this pattern. This is the smallest part of the pattern that repeats.” [with sheet facing student, circle the first ABB part in front of them]

After a few seconds, erase the circle and hand the child the marker saying “Now, it’s your turn”
28 & 29 ID Pattern Unit Test Items

28 - ID Pattern Unit AB: “Circle the smallest part of the pattern that repeats”

29 - ID Pattern Unit AABB: “Circle the smallest part of the pattern that repeats”
30 & 31 ID Pattern Unit Test Items

30 - ID Pattern Unit ABC: “Circle the smallest part of the pattern that repeats”

31 - ID Pattern Unit ABCD: “Circle the smallest part of the pattern that repeats”