LEARN IT BY ART™

Mixed Pattern Weaving

Lesson adapted from Susan Riley's Lesson Seeds, EducationCloset

Key Vocabulary

- Number Patterns
- Rule

Materials

- Pencil & Paper
- Scissors
- Pacon Notched Looms, item #0000110
- Trait-Tex 3-ply School Roving Yarn Dispenser, item #0000130
- Tru-Ray Construction Paper, cut in strips, item #103031
- Creativity Street Pony Beads, item #AC3552

Resources

- Math pattern review site:
  www.ixl.com/math/grade-4/mixed-patterns-review
- Weaving example video:
  www.youtube.com/watch?v=9Hdy1U9ulTg
- Weaving instructions:
  cassiestephens.blogspot.com/2012/06/in-art-room-weaving-part-1.html

Grade Level

4th-6th grade

Objective

Students will use their knowledge of mathematical patterns to create a pattern using a rule of their choice. Students will create a weaving to represent the pattern that includes various colors and textures.

Standards

4.OA.C.5
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.

VA:Cr2.1.4a.
Explore and invent art-making techniques and approaches.

Engagement

As a class, review math patterns using the IXL review page (see resources). For each pattern, ask students to explain or demonstrate that pattern artistically using blocks, a sketch, or modeling clay.

Activity

1. Show students examples of weavings that use various textures, and patterns. Watch the weaving example video (see resources) as a class and point out how students used colors and textures (such as braided strands of yarn) in their weaving.

2. Discuss the patterns used in a weaving—both the mathematical pattern used, and the pattern that is created based on color, texture, and repetition.

3. Model how to use a mixed pattern number sequence to map out a weaving on a piece of paper using certain colors and textures. For example, if the rule was add three starting at 3, the pattern would be 3, 6, 9, 12, 15, 18, 21...

Steps 3-5
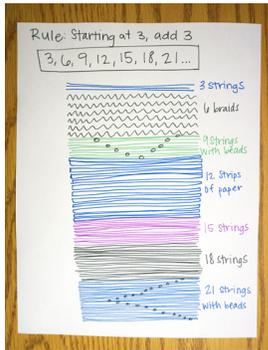
Step 6

Step 7

Step 8

Activity, continued...

4. While modeling how to map out the weaving on paper, include ideas for how to encorporate different textures using braided yarn, strips of paper, or beads.

5. Point out any features of the pattern you notice from mapping out your weaving on paper. For example, with this rule, the numbers in the sequence alternate between even and odd. Encourage students to explain why this is, and to find these additional features of their own patterns when they create their weavings.

6. Allow students to begin mapping out their own patterns on paper, and advance to creating their weavings (see weaving instructions in resources).

7. To remove weaving from the loom, un-tape the warp strings, cut them where they loop over the bottom of the loom, and then tie strings 1 & 2 together, 3 & 4 together, etc. until all warp strings are tied to another.

8. Weave the warp strings and the yarn hanging off the sides back into the weaving. (Instead of weaving these ends, students can also fold them behind and tape in place to save time.) Students can also add strings, beads or pom-poms to their weavings, if time allows.

9. After weavings have been completed, encourage students to pair up and share their finished product. Each student should use their partner's weaving artwork to identify the number pattern they used, as well as how that pattern was demonstrated with color and texture.

Assessment
Critique each weaving on the use of color and texture to communicate the number pattern, as well as the accuracy of the number pattern according to the chosen rule.

Note:
For students to be the most successful with this lesson, it is important for both number patterns and weaving to be taught explicitly in the math and art classrooms, respectively, prior to this culminating lesson.

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