Betty Kincannon
First Grade
Patterns

**State Competency/PASS: Standard 1.1:** The student will describe, extend, and create a variety of patterns using concrete objects.

**Objectives:** The student will be able to recognize, extend, and produce simple patterns. The student will work with AB, ABC, AAAB, AABC, ABB, AAB, ABCC, and AABB patterns.

**Materials:**

*Pattern Bugs* by Trudy Harris, Millbrook Press, 2001
Pattern Blocks
Basketballs
Various Rhythm Instruments
Pattern Block Templates
Pencils
Crayons
Stickers
Paper Strips
Smart board
Computers
Essential Skills Computer Program (Licensed Program purchased by the school)
Paper
Elmo


Instruction:

Introduction: Begin teaching this unit by administering a pre-test (Macmillan/McGraw Hill workbook page NA 5 and NA 6) to all students. Read the story Patterns Bugs to the class and define the term pattern. Reread the story and talk about the word patterns in the book and orally continue them.

Instructional Process: This unit is designed to be a six day study of patterns.
**Day One:** Introduce the unit as described and begin teaching the unit on patterns with a large group activity with pattern blocks. Put patterns blocks out on the floor in a long strip and have all the students sit on both sides of the strip or line of pattern blocks so all the students have easy access to the pattern blocks. Do a slap/clap rhythm and ask the students to join in as soon as they know the rhythm. After all the students are doing the rhythm, the students start saying the pattern as they continue doing the pattern with their body. Name the slap $A$ and the clap $B$ and say $AB$ as they continue to do the slap/clap rhythm. Instruct the students to make what they are saying with pattern blocks. After everyone has constructed a pattern block pattern, say the pattern as they point at the individual pattern blocks to check the pattern. Record the pattern on the Smart board using different colors of pens and/or different symbols and let students continue the pattern on the Smart board. Continue to do this same process to make other simple patterns such as $ABC$, $AAB$, $ABB$, and so on. As students continue this process the students can begin to make up the rhythms that they make with the pattern blocks.

**Day Two:** Introduce the three centers that will be used in this unit to enhance the learning process and do each center activity as a large group. (Basketball Center, Rhythm Center, and Smart board Center)
Day Three: Divide the students into three groups and have each group spend 20 minutes at each of the three centers.

Day Four: Take students to the computer lab to do the Essential Skills computer activities on patterns.

Day Five—Closure: Conclude the unit by rereading Patterns Bugs while showing the book pages on the Elmo. Have the students find the patterns on the pages and discuss them. Instruct the students to complete a journal entry to demonstrate their understanding of patterns.

Day Six—Assessment: Assess the learning of this unit by administering the post-test (same as pre-test) and by having the students produce a specified pattern on paper strips with stickers or their pattern block template.

Modifications/Accommodations: I have one student that is ADHD and several students that are more successful with active/hands-on activities than with paper work so teaching this unit with centers was a good accommodation for these students. Doing the centers as a large group before having the students do them on their own under the supervision of an aide helped those students who have problems listening and following instructions be more successful at the centers. I
selected my groups so that peer tutoring would be available to those students that might need it. One-on-one help was given to those students who needed it, also. Because students were making their own patterns, students could work on their own level of understanding. Those students who needed to be challenged more could make more difficult patterns and those who could only understand the simplest patterns could be successful by making simple patterns.

**Reflection:** The check sheet that I used as my pre-test/post-test was not what I had originally planned to use as my pre-test/post-test. I gave the check sheet to my students thinking the majority of them would be able to complete it easily with no errors. As demonstrated by my pre-test results, I was wrong. Because of these results I had to start my pattern unit with simpler patterns than I had originally planned. The Smart board program that I used at the Smart board Center frustrated my students because sometimes when they tried to drag the block to make the pattern some type of options box would pop up and they couldn't drag the block without tapping the board to get it off. Sometimes it would pop up repeatedly. When I found the site and played with it myself, this hadn't happen. However, because it happened when my students were playing the game, it would have been much better if I had known how to fix this problem or if I had made my own game, which I would next time.
The most valuable thing that my students learned to do throughout this unit that seemed to help them be more successful was to say the pattern aloud as they worked with it and I think they felt the freedom to do this because they were at centers. My ADHD student experienced more success with this math unit than with any other unit we have done this year and so did several of my students who have trouble listening to and then following instructions. I am convinced that this happened because each one experienced learning in their learning style strength. I learned a lot about my students’ learning styles as I observed them throughout this unit that I will use as I plan future lessons. Because of this gained insight I feel that this unit was very successful. My students will use this beginning knowledge of patterns to work with more complex patterns including growing patterns and number patterns.