

MAGNA-TILES® LESSON PLAN #7: Pattern Recognition with Magna-Tiles®

Objectives:

Students will engage in a variety of patterning activities that will demonstrate an understanding of repeated patterns (two or three elements) by identifying, reproducing, extending and creating patterns using Magna-Tiles®.

Students will:

- Identify what a pattern is
- Create shape patterns
- Predict what comes next in a pattern

Common Core Objective: Correctly name shapes regardless of their orientations or overall size. (K.G.A.2)

Materials:

- Magna-Tiles® Stardust 15-Piece Set
- Magna-Tiles® Clear Colors 32-Piece Set
- [Pattern Bugs](#) book by Trudy Harris (alternatively, [click here for a read aloud video](#))

Directions:

#1. Explain to the students that they are going to help you read a fun book today. Read [Pattern Bugs](#) to the students (or play the video). Pause before turning to the next page that completes the pattern. Allow the students to tell you what word will come next in the book. Then turn the page to reveal if they are correct.

#2. Ask the students how they knew what the next word was going to be. Guide them to understand that the words were creating a pattern (the same sequence of words being repeated over and over) and that is how they knew what word was going to come next.

#3. Tell the students that together you are going to create some patterns. Have four or five students stand in a line (boy, girl, boy, girl, boy). Ask the students what will come next in the pattern. Have one student stand, one student sit, one stand, one sit, etc. Ask the students what the next student in the pattern should do. Have one student touch his/her head, another student



touch his/her toes, one student touch his/her head, etc. Ask the students what the next student in the pattern should do.

#4. Show the students the Magna-Tiles®. Create a pattern using shapes. For example, use a glitter square, a triangle, a glitter square, a triangle. Ask a student what comes next in the pattern. Continue making shape patterns using the different Magna-Tiles® and having the students tell you what shape comes next.

#5. Add a third shape into the patterns. For example, make a pattern with a right triangle, square, equilateral triangle, right triangle, square, equilateral triangle, right triangle. Ask a student what shape should come next in the pattern. Make a few more patterns using three shapes.

#6. Allow students to take turns creating a pattern and having another student pick what shape comes next. While the students are creating patterns, ask them these extended questions:

- What comes next/ before/ after? How do you know?
- Can you finish the pattern?
- What part of the pattern repeats?
- Can you make a new pattern using the same materials?
- What will come next in your pattern?
- Are these patterns the same?
- What shapes or colors have you used in your pattern?
- How is this pattern different from the other pattern?

#7. Review with the students what a pattern is. Show them some examples of patterns with the Magna-Tiles® and some examples that aren't patterns (ie. triangle, square, square, triangle, square, triangle). Have the students tell you if you have created a pattern or not.

Assessment:

Have each student draw a picture of a pattern that he/she created.

Extension:

Give the students construction paper shapes. (If you trace the shapes, have the students cut them out, this is great practice for them.) Then have the students create a pattern by gluing the shapes onto a long, thin piece of construction paper. Measure the student's head and glue the ends of the construction paper together to create a hat.

