

## Kindergarten Clarifying Lessons: Learning Centers List for Patterns All Around

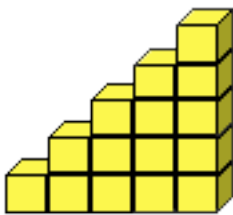
### Math Learning Centers

#### Copy the Staircase (K.5; K.6A; K.13B, C, D; K.15)

Students work in pairs to copy the staircase and explain why they think their staircase is the same as the one in the center. Listen carefully for references to the use of patterns in the students' procedures for copying.

##### *Materials*

- linking cubes
- teacher-made staircase with steps of one, two, three, four, and five cubes



##### *Extension*

One student can secretly remove part of the staircase they have made and ask the other student to make the piece that is missing. The piece constructed can be checked by comparing it to the first student's piece or by fitting it into the copy of the staircase. Again, the teacher should have students explain the reasoning used in deciding how to construct the missing piece.

#### Create and Describe a Pattern with Geoblocks (K.5, K.6A, K.14A, K.15)

Students work in pairs. One partner makes a pattern by placing geoblocks on the long strip of paper. The other partner describes the pattern: "tall, short, tall, short" or "pointed, flat, flat, pointed, flat, flat." Students remove the geoblocks from the strip, trade places, and repeat the activity several times. Listen carefully for students' use of physical attributes of the blocks to describe the patterns.

##### *Materials*

- geoblocks
- a long strip of paper

*Extensions*

- Challenge students to read their partner's pattern in more than one way.
- Challenge students to try to make a pattern that could be described in more than one way.

**Science Learning Centers****Make Patterns with Shells (K.5, K.6A, K.14A, K.15)**

Students work in pairs. One partner begins a pattern by placing shells on the workmat. The other partner continues the pattern. Students describe the pattern to each other and the reasoning behind the choices made for continuing it. Students remove the shells, trade places, and repeat the activity several times.

*Materials*

- a collection of seashells
- a workmat

*Extension*

Students record their patterns with shapes, letters, or other symbols and compare them to patterns made by other groups.

**Find Patterns in Flowers (K.5, K.6A, K.13A, K.14A)**

Students work in pairs and take turns identifying and describing patterns found in the pictures of flowers.

*Materials*

- large, colorful pictures of flowers

*Extension*

Students compare the patterns found in two different pictures. Students answer the following questions: "Are any of the patterns the same? How are they alike? Can you find this kind of pattern in any of the other flower pictures?"

**Language Arts Learning Centers****Attach Words to Body Patterns (K.5; K.6A; K.14A)**

Students work in pairs. One student "acts out" a pattern with body movements, like "stretch, bend, stretch, bend." A partner, or the rest of the class in a whole-group activity, will replicate the pattern of movements. Students will then use action words to describe the pattern as they act it out.

### *Materials*

- paper and marker for recording words (optional)

### *Extension*

Record the pattern on a large sheet of paper. Students look at the words as they are acting out and saying the pattern. Later, students might try to remember the action pattern by looking at the words or illustrate the word pattern with appropriate action pictures.

## **Identify Word Patterns in Stories (K.5, K.6A, K.14A)**

Students listen to a predictable story and identify word patterns when they occur. Ask students to predict what will come next in the story based on the word patterns they have identified.

### *Materials*

- books or tapes of predictable stories, e.g., *Brown Bear* (Martin), *Dear Zoo* (Campbell), *It Looked Like Spilt Milk* (Shaw), *Over in the Meadow* (Keats), *No More Dinosaurs!* (adapted by Todd)

### *Extensions*

- Students rewrite or dictate a variation of a predictable story by using different word patterns.
- Students are encouraged to create an original story or poem using word patterns.

## **Art/Fine Motor Learning Centers**

### **Make Quilt Patterns (K.5; K.6A; K.13B, C, D; K.14A; K.15)**

Students work in pairs. After looking at pictures of quilts (or real quilt blocks), one partner uses the pattern blocks to make a quilt block. The other partner copies the quilt block and describes the patterns found in it. The mirror may be used to see what more than one quilt block together would look like and what new patterns might occur. The die-cut pieces can be used to record the quilt pattern by gluing them onto a sheet of paper. Students trade places and repeat the activity.

### *Materials*

- pattern blocks
- mirror cards
- examples of pattern block quilt designs
- die-cut pattern block shapes and glue (optional)

*Extension*

After making a quilt block, one student secretly removes part of the block. The other student uses the patterns in the quilt block to replace what has been removed. Students discuss how they decided what was missing.

**Make Patterns with Linking Cubes (K.5; K.6A; K.13B, C, D; K.14A; K.15)**

Students work in pairs. Each partner uses the linking cubes to make a linear pattern. The partners trade patterns and try to continue the other partner's pattern. Students discuss the similarities and differences of their patterns.

*Materials*

- linking cubes

*Extension*

One partner secretly removes part of the pattern from somewhere in the middle of the pattern. The other partner will try to determine what is missing from the pattern. Encourage students to discuss the possibility of there being more than one pattern that could be made when inserting the missing piece.

**Music/Movement Learning Centers****Make Rhythmic Patterns (K.5, K.6A, K.14, K.15)**

Students work in pairs. A student, or the teacher, claps a pattern, or plays a pattern with a musical instrument. A partner, or the rest of the class in a whole-group activity, replicates the rhythmic pattern. Body motions can be added to the rhythmic pattern. Repeat several times with different patterns.

*Materials*

- an assortment of musical instruments (e.g., a xylophone, wooden blocks, a triangle, finger cymbals, etc.)
- large chart paper and markers

*Extension*

Use symbols to record the pattern on a large sheet of paper. Students look at the symbols as they repeat the pattern. Several different instruments or sounds can be used to fit the same written pattern, and students can discuss similarities and differences.

**Act Out a Pattern (K.5, K.6A, K.14A)**

Students work in pairs. One partner acts out a pattern, e.g. hop,hop, step, hop, hop, step. The other partner copies the pattern and predicts what should come next. Students trade places and repeat the activity.

*Extension*

Challenge students to record the pattern using linking cubes, pictures, or symbols.