Pre-K Chapter 6

Content Area: **Math**
Course(s):
Time Period: **February**
Length: **6-8 Weeks**
Status: **Published**

Unit Overview

In Chapter 6, students will explore patterns by identifying, describing, copying, extending, creating, and using patterns to problem solve. As with shapes, students observe patterns in the world around them. Patterns are in fabric used in clothing or upholstery. There are patterns in lyrics to songs, instruments in music, and dialogue in stories. This chapter introduces preschoolers to identifying, describing, copying, and extending simple patterns. They will use concrete materials to demonstrate their understanding of patterns. Exploring patterns is a foundational preparation to observing similarities and differences in mathematical problems in algebra.

What's Happening Developmentally?

Repetition is the most basic form of patterns. This allows children to better understand relationships in their environment and to develop a sense of confidence. Patterns are found in the arts, social interactions, language, and sciences and are considered a precursor to algebraic thinking.

The typical 3-year-old is beginning to show interest in and an understanding of basic patterns. They will engage in such activities as beading (alternating two different colors) and building a tower (alternating two different size blocks). As their confidence increases, they will seek and emulate simple patterns in their environment.

Most 4-year-olds continue to use objects in creating and recognizing patterns. They can identify the pattern unit, the element that repeats over and over in the pattern. With their growing confidence in identifying patterns, they can distinguish sound and movement patterns as well as color, shape, and size patterns.

5-year-olds might extend their use of patterning by moving toward more complex patterns such as ABC or AAB rather than the simpler two element patterns such as AB. Letters and numbers might be used in recognizing and creating patterns. Ultimately, exploring patterns provides a beginning basis for algebra.

Enduring Understandings

During this chapter, students will learn to:

- Identify, describe, copy, extend, and create patterns

- Explore the environment to discover patterns.
- Find a pattern to solve a problem.

After this chapter, students will learn to:

- Rote count from one to 10
- Count, identify, and create groups of objects from six to 10. Use one-to-one correspondence.

Essential Questions

How do we identify and make a pattern?

Instructional Strategies & Learning Activities

Lesson	6-1	6-2	6-3	6-4	6-5	6-6
Lesson/Objective	**Identify and Describe Patterns** (pp.35A-35D) **Objective**: Students will recognize repeating patterns.	**Patterns in the Environment** (pp. 36A-36D) **Objective:** Students will recognize repeating patterns in the environment.	**Copy Patterns** (pp. 37A-37D) **Objective:** Students will copy simple repeating patterns.	**Extend Patterns** (pp. 38A-38D) **Objective:** Students will extend simple patterns by predicting what comes next.	**Create Patterns** (pp. 39A-39D) **Objective:** Students will create simple patterns.	**Problem Solving Strategy** (pp.40A-40B) **Objective:** Students will use the Find a Pattern strategy to solve position and pattern problems
Foundation for CCSS	K.MG.3, K.G.1	K.G.1	K.CC.4a, K.G.1	K.CC.4c, K.G.1	K.G.1, K.G.2	K.G.1
Math Vocabulary	beat, pattern, repeat, rhythm	environment, pattern, repeat, rhythm	copy, match, one-to-one, pattern, repeat	extend, pattern, repeat	create, pattern, repeat	
Lesson Resources	**Materials:** Flip Book,	**Materials:** Flip Book,	**Materials:** Flip Book, 8 1/2"	**Materials:** Flip Book, green	**Materials:** Flip Book, poster	**Materials:** Flip Book,

	rhythm instruments **Manipulatives-** attribute buttons **Other Resources-** *I Went Walking* by Sue Williams *What Could Come Next?* by David Whiting	crayons, chart paper, sticky notes **Manipulatives**-none **Other Resources-** *Lots and Lots of Zebra Stripes Patterns in Nature* by Stephen R. Swinburne *What Could Come Next?* by David Whiting	x 2" white paper strips, (optional: smile stickers: red and green), toy xylophone with colored keys **Manipulatives**-red and green color tiles, connecting cubes **Other Resources-** *Beep, Beep, Vroom, Vroom* by Staurt J. Murphy	crayons, red markers, red and yellow dry erase markers, 1" x 2" cards, cups **Manipulatives**-two-color counters, pattern blocks **Other Resources-** *Beep, Beep, Vroom, Vroom* by Staurt J. Murphy *What Could Come Next?* by David Whiting	boards, chairs, blue construction paper, paper, crayons, tape **Manipulatives**-colored tiles **Other Resources-** *The Shape of Things* by Dayle Ann Dodds *What Could Come Next?* by David Whiting	erasable marker, strings **Manipulatives-** attribute buttons, triangle adn square pattern blocks **Other Resources-** *Pattern Bugs* by Trudy Harris *What Could Come Next?* by David Whiting
Technology connectED	Song: "Everybody Here's Got Rhythm"	Song: "Everybody Here's Got Rhythm"	Song: "Everybody Here's Got Rhythm"	Song: "Everybody Here's Got Rhythm"	Song: "Everybody Here's Got Rhythm"	Song: "Everybody Here's Got Rhythm"
Researching All Learners	Stepping Back English Language Learners Going Farther	Stepping Back English Language Learners Going Farther	Stepping Back English Language Learners Going Farther	Stepping Back English Language Learners Going Farther	Stepping Back English Language Learners Going Farther	Stepping Back English Language Learners Going Farther

Integration of Career Readiness, Life Literacies and Key Skills

	Different types of jobs require different knowledge and skills.
9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

Computer Science and Design Integration

8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
8.2.2.ED.3	Select and use appropriate tools and materials to build a product using the design process.

Interdisciplinary Connections

All disciplines are incorporated into the preschool program when appropriate.

LA.RI.K.1	With prompting and support, ask and answer questions about key details in a text.
LA.RI.K.2	With prompting and support, identify the main topic and retell key details of a text.
LA.RI.K.4	With prompting and support, ask and answer questions about unknown words in a text.
LA.RI.K.7	With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).
LA.RF.K.1	Demonstrate understanding of the organization and basic features of print.
LA.RF.K.2	Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
LA.RF.K.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words.

Differentiation

Each chapter in MyMath teacher manual contains differentiated instruction for Approaching Level, On Level, and Above Level students.

Modifications & Accommodations

IEP and 504 accommodations will be utilized in addition to the differentiated instruction in the Unit.

Benchmark Assessments

Checklists

Teacher observation

Formative Assessments

Checklists

Teacher observation

Discussion

Summative Assessments

Assessments for chapters located in MyMath Unit.

Instructional Materials

See Above

Standards

4.1.4.a	Accurately count quantities of objects up to 10, using one-to one-correspondence, and accurately count as many as 5 objects in a scattered configuration.
4.3	Children begin to conceptualize measurable attributes of objects.
4.3.1	Sort, order, pattern, and classify objects by non-measurable (e.g., color, texture, type of material) and measurable attributes (e.g., length, capacity, height).
4.4.3.a	two-dimensional shapes (e.g., use two dimensional shapes to make designs, patterns and pictures by manipulating materials such as paper shapes, puzzle pieces, tangrams; construct shapes from materials such as straws; match identical shapes; sort shapes based on rules [something that makes them alike/different]; describe shapes by sides/angles; use pattern blocks to compose/decompose shapes when making and taking apart compositions of several shapes).