Kindergarten Lesson Sequence
(21 Lessons)

Free Exploration and Creative Learning

Lesson One  Learn the rules, establish the environment. Students experience new materials on their own. Our questions guide their thinking.

  Topic  Pattern Blocks.
  Topic  Power Blocks.
  Topic  Geoblocks, Unifix Cubes, toothpicks, or any other available materials.

Patterns and Connections

Lesson One  Learn what is meant by "pattern." Learn the A-B system of describing patterns. The whole class invents patterns, then smaller groups devise ways to share. Pattern searches extend to the environment.

  Topic  A-A-B.
  Topic  A-A-A-B.
  Topic  A-B, A-B.
  Topic  A-B-C and more.
  Topic  Five minutes now and then.

Lesson Two  Learn to relate A-B patterns to materials. Students create and share A-B patterns. Students also learn to check their neighbors to ensure that everybody understands.

  Topic  Pattern Blocks and A-A-B.
  Topic  Power Blocks and A-A-B.
  Topic  Other materials and A-B patterns.

Lesson Five  Learn to extend pattern searches beyond the period set aside for math. Learn to connect mathematics to art. Students create pattern designs for themselves.

  Topic  Pattern Block walls.
  Topic  Pattern Block mosaic designs.
  Topic  Graph paper patterns.
  Topic  Other patterned art we might choose to use.

Beginning Number

Lesson One  Learn to count up and back by ones. We establish a counting environment.

  Topic  Counting up.
  Topic  Counting back.
  Topic  Counting every time there are things to count.

Lesson Two  Learn to look for patterns in the counting numbers. We post numbers for students to search for patterns.

  Topic  Search the numbers from 0 to 100 for patterns.
  Topic  Learn to say the names of numbers.
  Topic  Look at the 00-99 matrix.

Lesson Three  Learn the difference between 1, 2, 3 and 1st, 2nd, 3rd. We use numbers in language to convey meaning.

  Topic  Language use is not lesson bound. The use of cardinal and ordinal numbers is done consciously everyday.

Lesson Four  Learn the fiveness of five. We surround our students with the concept of numbers from three to as far as we decide to go.

  Topic  3 with squares.
  Topic  3 with tooth picks.
  Topic  3 with wooden cubes.
  Topic  3 with Pattern Blocks.
  Topic  4 with squares.
  Topic  4 with tooth picks.
  Topic  4 with wooden cubes.
  Topic  4 with Pattern Blocks.
  Topic  5 and more with each material, in turn.
Sorting, Classifying, Expanding Language

Lesson One  Learn to sort by attributes. Students sort objects into groups in a variety of ways.
              Teacher lists the ways.
Topic     Each new material produces a variation of the basic lesson.
Topic     Sorting buttons, making lists.
Topic     Sorting keys, making lists.
Topic     Sorting whatever else is available in quantity.

Lesson Two  Learn to be aware of attributes everywhere. Students take sorting walks to learn to see
            what is already there.
Topic     Sorting walks.
Topic     Each walk taken is a different topic.

Lesson Three Use sorting and classification knowledge to create informal definitions of words. We
            sort shapes, words, or objects as students create definitions for the sorts.
Topic     We use this lesson when we have a definition we wish to teach.
Topic     Shapes—quadrilaterals, triangles, squares, etc.
Topic     What other definitions might we choose to use?

Lesson Four Learn to find relationships between different shapes. Students play games with
           Attribute Blocks that focus on thinking logically and systematically.
Topic     Pattern sorts, teacher at the overhead.
Topic     Identify the missing piece.

Geometry, Shapes, Relationships and Constructions

Lesson One  Provide a background in geometry equally for boys and girls, rich and poor, while
            exploring shapes in geometry. Students build as our questions focus their
            discoveries.
Topic     Today is building day, let’s see what you can build.
Topic     Lego blocks, Tinker Toys, Geoblocks, Pattern Blocks, Power Blocks, straws, toothpicks
            and clay, kindergarten building blocks. Each material used for building is a topic.

Lesson Three Learn to recognize reflective symmetry in shapes. Students explore lines of symmetry
            with materials and mirrors.
Topic     Free exploration with mirrors.
Topic     Pattern Blocks and mirrors - exploring symmetry.
Topic     Power Blocks and mirrors - exploring symmetry.

Lesson Nine Learn to be aware of the geometry in our lives. We ask our students to look more
            closely at what they already see.
Topic     Make a list of rectangular shapes. What other shapes can we list?
Topic     What shall we look for today?

Beginning Addition and Subtraction

Lesson One  Learn to create and check addition problems. Students create addition problems that
            they can check by counting.
Topic     Creating addition problems with handful of squares.

Lesson Three Learn to create and check subtraction problems. Students create subtraction problems
            that they can check by counting.
Topic     Creating subtraction problems with handful of squares.

Graphing, Probability and Statistics

Lesson One  Learn to use graphing as a tool for finding answers to questions. Students learn to turn
            their curiosity into data to graph.
Topic     Students make graphs in response to questions asked or curiosity expressed that leads
            to numbers that can be represented pictorially.
| Lesson Two | Learn how to display information in a variety of ways. Students invent more ways to graph data than they had thought to use before. |
| Topic | Examples of different kinds of graphs are shared as students think of ways to graph they have not used before. |

**Measurement, Estimation and Time**

| Lesson One | Learn that measurement is a part of everything we do. We create a measuring environment in our room by making measurements a tool for finding out. |
| Topic | Measurement is in the environment we create. |
| Topic | Measurement is in the questions that we ask. |
| Topic | Measurement is in "Is taller than...". |

| Lesson Four | Learn about time. In general, we teach time by using it. |
| Topic | Time is an experience. It is taught all day long, all the time. |