BIE Suggested BIE Scope and Sequence – Grade 6 Math Interim 1

Unit 1: Ratios and Rates (6.RP.A.1, 6.RP.A.2, 6.RP.A.3)

- **Focus:** Foundational proportional reasoning
- **Key Learnings:**
  - Understand ratio concepts and use ratio language to describe relationships (6.RP.A.1).
  - Understand unit rates and connect them to real-world contexts (6.RP.A.2).
  - Solve real-world and mathematical problems involving ratios and rates, including tables, graphs, tape diagrams, and double number lines (6.RP.A.3).
- **Developmental Rationale:**
  Proportional reasoning is a cornerstone for middle school math. Students need this foundation before diving into rational numbers and algebraic relationships.

Unit 2: Dividing Fractions (6.NS.A.1)

- **Focus:** Fraction division as multiplicative reasoning
- **Key Learnings:**
  - Interpret and compute quotients of fractions (including fraction ÷ fraction).
  - Solve word problems involving fraction division with visual models and equations.
- **Developmental Rationale:**
  Builds on Grade 5 fraction multiplication/division and supports later ratio/rate and rational number operations.

Unit 3: Operations with Multi-digit Numbers and Decimals (6.NS.B.2, 6.NS.B.3)

- **Focus:** Procedural fluency with place value
- **Key Learnings:**
  - Fluently divide multi-digit numbers using standard algorithms (6.NS.B.2).
  - Fluently add, subtract, multiply, and divide multi-digit decimals (6.NS.B.3).
- **Developmental Rationale:**
  Solid computational fluency ensures students can handle more complex tasks in rational numbers, expressions, and equations.

Unit 4: Integers and the Number Line (6.NS.C.5, 6.NS.C.6)

- **Focus:** Rational numbers and opposites
- **Key Learnings:**
  - Understand positive and negative numbers in real-world contexts (6.NS.C.5).
  - Locate and plot integers and other rational numbers on the number line (6.NS.C.6).
- **Developmental Rationale:**
  Prepares students to operate with signed numbers and interpret coordinate planes, key for later algebra.

Unit 5: Expressions and Equations (6.EE.C.9)

- **Focus:** Algebraic thinking and real-world applications
- **Key Learnings:**
  - Understand the concept of independent and dependent variables.
  - Write and use equations to represent real-world relationships.
  - Analyze relationships using tables and graphs.

- **Developmental Rationale:**
  Culminates the year by applying ratios, operations, and rational number knowledge in algebraic contexts.