

Mathematics Curriculum Outline

Approach to Teaching & Learning – Gillian Hollenstein

1. Teaching Philosophy: My approach to mathematics instruction is grounded in the belief that students learn best through active problem-solving, discussion, and exploration rather than rote memorization. Lessons are designed to build confidence, encourage perseverance, and promote deep understanding.

- Mathematics is best learned by doing and engaging in problem-solving rather than memorization.
- Instruction builds student confidence by positioning them as capable learners.
- Emphasis on reasoning, communication, and multiple solution paths to deepen conceptual understanding.

2. Core Instructional Practices: Classroom learning is structured through consistent routines and strategies that encourage student voice, collaboration, and flexible thinking.

- **Numeracy Routines:** Daily short activities that strengthen number sense, mental math, and flexible thinking (e.g., Number Talks, Which One Doesn't Belong).
- **Open-Ended Questions:** Encourage discussion, multiple strategies, and student-to-student dialogue.
- **Three Reads Strategy for Word Problems:**
 1. Read for context (story).
 2. Read for quantities (numbers/relationships).
 3. Read for the question (what needs solving?).
- **Instructional Routines:** Clear, repeated structures for solving problems, sharing strategies, and consolidating learning.

3. Curriculum Framework: Our curriculum is anchored in HMH Into Math, which provides structured progressions while allowing space for rich classroom discussions and real-world connections. The program balances fluency, conceptual depth, and application.

- **HMH Into Math** serves as the foundation for instruction, providing coherent progressions across grade levels.

- Lessons combine procedural fluency, conceptual understanding, and application.
- Vertical alignment ensures each grade prepares students for success in higher-level math.

4. Assessment & Feedback: Assessment is ongoing and varied, allowing teachers to measure student understanding daily while also capturing growth across units and modules. Feedback is designed to guide, not just grade.

- **Module Assessments:** Pre-assessments at the beginning and post-assessments at the end to measure growth.
- **Formative Assessments:** Lesson “Check for Understanding” tasks to monitor learning in real time., and in-class discussions for ongoing feedback.
- **Summative Assessments:** Pre-assessments at the beginning and post-assessments at the end to measure growth.
- **Feedback:** Timely, specific, and growth-oriented, helping students see both strengths and next steps.

5. Classroom Culture: The classroom is a safe space where students are encouraged to take risks, share ideas, and learn from mistakes. Collaboration and respect form the foundation of the learning environment.

- Encourages risk-taking and views mistakes as learning opportunities.
- Promotes collaboration, discussion, and respectful critique of ideas.
- Values multiple representations (visual, numerical, algebraic, verbal).

6. Real-World Connections: Students learn to see mathematics not just as abstract numbers, but as a tool to make sense of the world. By embedding real-life contexts, math becomes meaningful and engaging.

- Embeds mathematics in finance, measurement, and data contexts.
- Helps students see math as a meaningful, everyday problem-solving tool.