

orton gillingham math curriculum

orton gillingham math curriculum is an innovative approach to teaching mathematics that draws on the principles of the Orton-Gillingham method traditionally used for literacy education. This curriculum emphasizes multisensory, structured, and explicit instruction tailored to meet the needs of learners who struggle with mathematical concepts, including those with dyscalculia or other learning differences. By integrating visual, auditory, and kinesthetic learning modalities, the Orton Gillingham math curriculum aims to build a strong foundational understanding of math skills while promoting confidence and independent problem-solving. This article explores the core components, benefits, implementation strategies, and available resources related to this specialized math instruction method. Readers will gain a comprehensive understanding of how the Orton Gillingham approach can transform math education for diverse learners.

- Understanding the Orton Gillingham Math Curriculum
- Core Principles and Methodology
- Benefits of the Orton Gillingham Math Curriculum
- Implementation Strategies in the Classroom
- Resources and Materials for Instruction

Understanding the Orton Gillingham Math Curriculum

The Orton Gillingham math curriculum adapts the foundational techniques of the Orton-Gillingham literacy method to the teaching of mathematics. This curriculum provides a structured and sequential approach designed to address the specific learning needs of students who struggle with math, particularly those with dyscalculia or other math-related learning challenges. It focuses on explicit instruction, multisensory engagement, and systematic skill-building to ensure that students grasp fundamental concepts before progressing.

Unlike traditional math programs that may rely heavily on rote memorization or abstract reasoning, the Orton Gillingham math curriculum integrates concrete experiences with symbolic understanding. This approach helps students develop a deep conceptual knowledge of numbers, operations, and problem-solving techniques. It is particularly effective for learners who benefit from a hands-on, multisensory experience that connects visual, auditory, and tactile learning channels.

Core Principles and Methodology

The methodology underlying the Orton Gillingham math curriculum is grounded in several key principles that ensure effective learning and retention. These principles guide the instructional design and delivery, making the curriculum accessible and effective for all learners, especially those with learning difficulties.

Multisensory Instruction

Multisensory instruction is central to the Orton Gillingham math curriculum. It engages students through multiple senses simultaneously, such as sight, hearing, touch, and movement. For example, students might use manipulatives to physically model math problems while verbalizing the steps aloud. This multisensory approach helps reinforce neural pathways associated with learning math concepts.

Structured and Sequential Learning

The curriculum follows a carefully structured and sequential progression of skills. Concepts are introduced in a logical order, ensuring mastery at each stage before advancing. This scaffolded approach prevents gaps in understanding and builds confidence through incremental success.

Explicit and Systematic Teaching

Explicit instruction means that teachers provide clear, direct explanations of math concepts and procedures. Systematic teaching involves consistent practice and review of skills to promote fluency and automaticity. Both elements are essential in the Orton Gillingham math curriculum to ensure students fully understand and retain mathematical knowledge.

Diagnostic and Individualized Instruction

Assessment plays a crucial role in identifying each student's strengths and areas for growth. The curriculum supports ongoing diagnostic evaluation to tailor instruction to individual needs. This personalized approach maximizes learning outcomes and addresses specific challenges faced by students.

Benefits of the Orton Gillingham Math Curriculum

The Orton Gillingham math curriculum offers numerous benefits that make it a

valuable choice for educators and learners alike. Its evidence-based methods and learner-centered strategies promote meaningful and lasting math comprehension.

- **Improved Conceptual Understanding:** Students develop a clear grasp of math concepts through multisensory and concrete experiences.
- **Enhanced Retention and Fluency:** Repetitive, explicit instruction helps students retain math skills and perform calculations more fluently.
- **Support for Diverse Learners:** The curriculum is especially effective for students with learning disabilities, such as dyscalculia, and those who struggle in traditional math programs.
- **Increased Confidence:** Mastery of foundational skills builds student confidence and motivation in mathematics.
- **Development of Problem-Solving Skills:** Systematic instruction encourages logical thinking and application of math concepts to real-world problems.

Implementation Strategies in the Classroom

Successful implementation of the Orton Gillingham math curriculum requires careful planning, training, and adaptation to the classroom environment. Educators must understand the core principles and tailor instruction to meet student needs.

Teacher Training and Professional Development

Teachers should receive specialized training to effectively deliver Orton Gillingham math instruction. Professional development programs often include workshops on multisensory techniques, diagnostic assessments, and lesson planning aligned with the curriculum's principles.

Use of Manipulatives and Visual Aids

Incorporating physical manipulatives such as counters, base-ten blocks, and number lines supports multisensory learning. Visual aids like charts and diagrams further clarify abstract concepts, making them more accessible.

Small Group and One-on-One Instruction

Because the curriculum emphasizes individualized learning, instruction is often delivered in small groups or one-on-one settings. This format allows teachers to closely monitor progress, provide immediate feedback, and adjust pacing to suit each student.

Regular Assessment and Progress Monitoring

Ongoing formative assessments are essential to identify areas needing reinforcement and to celebrate milestones. This data-driven approach ensures that instruction remains targeted and effective.

Resources and Materials for Instruction

Various resources and materials are available to support educators implementing the Orton Gillingham math curriculum. These tools align with the curriculum's multisensory and structured approach to teaching math.

- **Manipulatives:** Items such as counting beads, base-ten blocks, fraction tiles, and abacuses facilitate hands-on learning.
- **Workbooks and Worksheets:** Structured practice materials reinforce concepts and provide opportunities for repeated application.
- **Instructional Guides:** Teacher manuals and lesson plans offer step-by-step guidance on delivering lessons aligned with Orton Gillingham principles.
- **Assessment Tools:** Diagnostic tests and progress monitoring forms help track student development and inform instruction.
- **Digital Resources:** Interactive software and apps designed with multisensory engagement in mind can supplement traditional materials.

Access to these resources enhances the effectiveness of the Orton Gillingham math curriculum and supports differentiated instruction tailored to diverse learner profiles.

Frequently Asked Questions

What is the Orton Gillingham math curriculum?

The Orton Gillingham math curriculum is an instructional approach that applies the principles of the Orton Gillingham method, originally developed for reading, to teaching math concepts using a multisensory, structured, and sequential methodology to support students with learning difficulties.

How does the Orton Gillingham approach benefit math learners?

The Orton Gillingham approach benefits math learners by providing multisensory instruction that engages visual, auditory, and kinesthetic learning styles, helping students better understand and retain math concepts, especially those with dyslexia or other learning differences.

Is the Orton Gillingham math curriculum suitable for students with dyscalculia?

Yes, the Orton Gillingham math curriculum is particularly suitable for students with dyscalculia, as it offers structured and explicit instruction that breaks down math concepts into manageable steps, making it easier for these students to grasp and apply mathematical skills.

Can the Orton Gillingham method be integrated into existing math programs?

Yes, the Orton Gillingham method can be integrated into existing math programs by incorporating its multisensory and structured techniques into lessons, thereby enhancing comprehension and retention for students who struggle with traditional math instruction.

Where can educators find resources for implementing the Orton Gillingham math curriculum?

Educators can find resources for implementing the Orton Gillingham math curriculum through specialized training programs, professional development workshops, educational publishers that focus on multisensory math materials, and organizations dedicated to Orton Gillingham methods.

Additional Resources

1. Orton-Gillingham Math Foundations: A Multisensory Approach

This book introduces the fundamental principles of the Orton-Gillingham approach adapted specifically for math instruction. It emphasizes multisensory techniques to help students with dyslexia and other learning difficulties grasp math concepts more effectively. Teachers will find practical strategies and lesson plans that integrate visual, auditory, and

kinesthetic learning styles.

2. Multisensory Math Strategies for Struggling Learners

Designed for educators working with students who struggle with math, this book offers detailed methods rooted in the Orton-Gillingham philosophy. It covers building number sense, arithmetic skills, and problem-solving through hands-on activities. The book also includes assessment tools to track student progress.

3. Orton-Gillingham Inspired Math Intervention: Practical Activities and Lessons

This resource provides a collection of engaging, multisensory activities tailored to support math intervention programs. Each lesson is scaffolded to build on prior knowledge, ensuring cumulative learning. It's perfect for tutors and special educators seeking structured, evidence-based math instruction.

4. Teaching Math to Dyslexic Students: An Orton-Gillingham Approach

Focused on addressing the unique challenges dyslexic students face in math, this book adapts Orton-Gillingham's language-based techniques to numerical concepts. It highlights ways to reduce math anxiety and improve comprehension through systematic, explicit instruction. Educators will gain insights into customizing lessons to individual student needs.

5. Structured Math Lessons Using Orton-Gillingham Principles

This title offers a step-by-step guide to creating structured math lessons that incorporate Orton-Gillingham's multisensory and sequential approach. It emphasizes clarity, repetition, and incremental difficulty to enhance understanding. The book is suitable for classroom teachers and intervention specialists alike.

6. Orton-Gillingham Math Toolkit: Resources for Effective Instruction

A practical toolkit filled with manipulatives, visual aids, and reproducible worksheets designed around Orton-Gillingham methods. This book supports teachers in making abstract math concepts tangible and accessible. It includes guidance on adapting materials for different age groups and skill levels.

7. Language and Math Integration: Orton-Gillingham Techniques for Conceptual Learning

This book explores the intersection of language development and math understanding using Orton-Gillingham strategies. It explains how improving vocabulary and linguistic skills can enhance math reasoning and problem-solving. Educators will find interdisciplinary lesson ideas that promote deeper learning.

8. Orton-Gillingham Math Curriculum for Early Learners

Tailored for young children, this curriculum uses Orton-Gillingham's multisensory framework to introduce basic math concepts like counting, addition, and subtraction. The book features playful, hands-on activities that foster engagement and confidence. It's ideal for preschool and early

elementary educators.

9. *Assessment and Progress Monitoring in Orton-Gillingham Math Instruction*

This title focuses on effective assessment techniques to monitor student growth within an Orton-Gillingham math program. It includes formative and summative assessment tools designed to inform instruction and provide meaningful feedback. Teachers will learn how to adjust teaching strategies based on data to maximize student success.

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