

BREAKTHROUGH MATHEMATICS

Unlocking the Power of
Lesson Study



PEARSON

Enhancing Instruction and Student Learning

The Evolution of *Lesson Study*

1995

TIMSS Video Study provides a window into classrooms from around the world

1999

The Teaching Gap identifies Japanese lesson study as a powerful vehicle for enhancing instruction

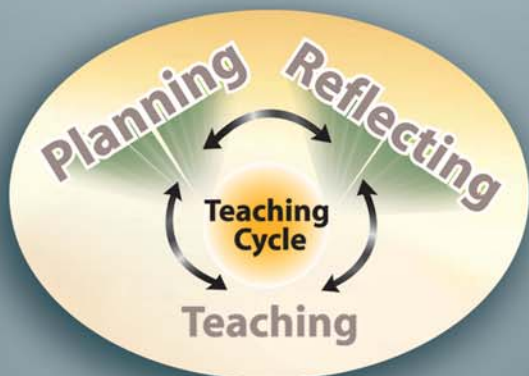
2002

School districts experiment with lesson study and realize the challenges of importing lesson study to North America

2004

BreakThrough Mathematics adapts lesson study for a North American context by:

- Using video records of practice to safely analyze an authentic classroom lesson
- Systematically building pedagogical content knowledge to sharpen the focus on student learning
- Providing readings and focus questions that serve as the 'Knowledgeable Other', probing and challenging current cultural beliefs about teaching



BreakThrough Mathematics shifts the emphasis to planning and reflecting



The Power of *Lesson Study* and BreakThrough Mathematics

- Slows down the process of teaching in order to examine and enhance instructional practice
- Based on the idea that teachers learn by collaboratively planning, observing, and analyzing classroom lessons
- Imposes an unrelenting focus on student learning throughout the process

Unlocking the Power of BreakThrough Mathematics Grades 7–12

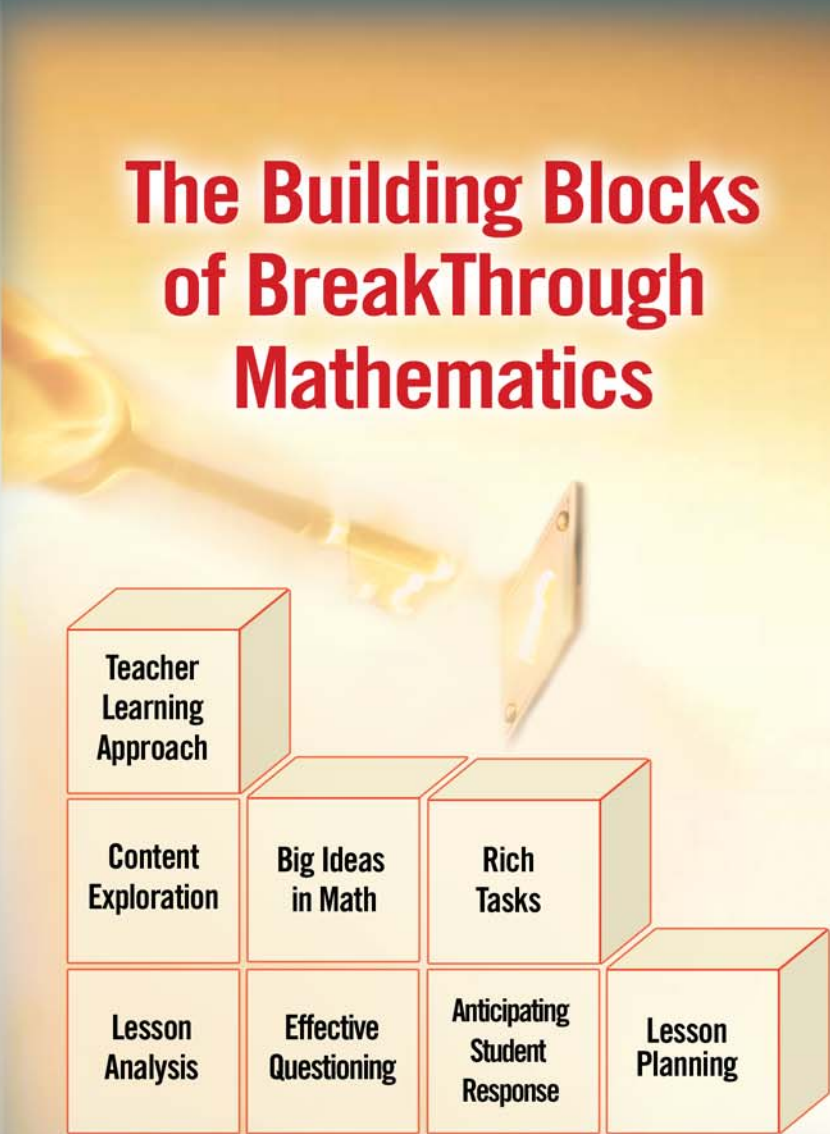
Enhancing the Impact of Teaching

- Emerges out of findings from the *TIMSS Video Study* that high achieving countries implement rich problems in a way that maintains high levels of reasoning throughout a lesson
- Utilizes real classroom video, expert interviews, and participant interaction to reflect on learning and analyze teaching
- Provides teachers with an ‘inch-wide, mile-deep’ understanding of a concept and the types of rich tasks that enhance learning
- Equips teachers to recognize elements of effective instruction, refine their questioning skills, and anticipate student responses
- Facilitates long-term, collaborative professional learning for mathematics teachers

Flexible and Adaptable Professional Learning

- Accommodates flexible modes of delivery including face-to-face, online, or blended environments
- Offers a wide range of modules to address district and teacher learning needs
- Appropriate as a district-led course of study or for school-based learning communities
- Personalized implementation support by Pearson Professional Learning Consultants

The Building Blocks of BreakThrough Mathematics



Building An Understanding of Teaching and Learning

BreakThrough Mathematics Courses

3 Day Teacher-Leader Course

- Provides a first hand opportunity to experience the unique insights and collaborative dynamic that emerges from this professional learning structure

5 Day Facilitator Course

- Builds district capacity to deliver *BreakThrough Mathematics* modules and acquire the knowledge and skills to facilitate the professional learning on a wide scale

Modules for Grades 7–12

Recommended Foundation Module

Perspectives on Problem Solving (Grades K-12)

Focus on Struggling Readers (Grades 6-10)

Focus on Assessment (Grades 6-10)

Ratio and Proportion (Grades 7-10)

Solving Equations (Grades 7-10)

Rational Numbers and Operations (Grades 7-10)

Statistics, Data Analysis and Probability (Grades 7-10)

**COMING
2008**

Geometric Reasoning and Congruence (Grades 11-12)

Solving Non-Linear Equations (Grades 11-12)

Functions and Modelling (Grades 11-12)

Measurement (Grades 11-12)

Other modules are available for K-3 and Grades 4-6

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For more information, contact your Sales Representative or call
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