

Assessing Mathematics

with the

Learning Record

**A Handbook (in progress) for
Teachers of Mathematics, Grades K-8**

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This Handbook, *Assessing Mathematics*, developed by the Center for Language in Learning (CLL), is intended for teachers who are using the Learning Record (LR) to monitor and measure student performance in mathematics throughout the year as well as at year’s end. Some teachers using the LR may be already using the Learning Record to assess literacy. Other teachers may be new to using the Learning Record. Both groups of teachers, however, should find this Handbook helpful. The Handbook is organized in three sections, Part I (Chapters 1-3), Part II (Chapters 4-9), and Part III (Chapters 10-11).

Part I includes an overview and brief descriptions of the Learning Record Mathematical Scales and the Recording Form. Copies of the Mathematical Understanding and Mathematical Disposition Scale are included at the end of Chapter 2. A copy of the LR Mathematics Recording Form is at the end of Chapter 3. Users may want to temporarily remove the appropriate pages from the Handbook and place them beside the text as they are reading about them.

Part II focuses on how to use the mathematics component of the Learning Record in your classroom. Each chapter includes suggestions for collecting and documenting evidence related to one part of the LR recording form. Examples of student work and teacher commentary are included in each chapter.

One student, Glen, a fourth grader, is referenced in several chapters. For the most part, his work is not included in the Handbook. Instead, his work is included in copies of his full Learning Record that supplement the Handbook. If you are a participant in a CLL workshop for K-8 teachers, your coach will use Glen’s Learning Record during your sessions. Please note that the example of Glen’s LR is just that, an example, and not intended to be “the” model of how a Learning Record “should” be completed.

Part III describes how to place students' records on the mathematical scales and the moderation process.

It is assumed that most teachers using this Handbook will be working with a CLL Coach, either at their school site, in a CLL-sponsored institute, or at a workshop series. Therefore, this Handbook includes a number of suggested activities that may be part of the institute or workshop. These activities are identified in "To Do" sections, near the end of most chapters, and generally ask participants to examine samples of student work and discuss how they might be documented in the Learning Record. [These samples are not included in this draft of the Handbook.] As noted on the cover, this Handbook is "in progress." Suggestions for improving it are welcome and may be made directly to your coach or sent to the Center for Language in Learning. [The CLL is no longer in operation.]

Resources for Mathematics Teaching and Learning

This Handbook does not specifically provide information about what research tells us how students learn mathematics, nor does it provide suggestions for how to improve the teaching of mathematics. However, it is closely aligned with the *Principles and Standards of School Mathematics* published by the National Council of Teachers of Mathematics* (NCTM) in 2000. It is highly recommended that teachers become familiar with this resource. Teachers also may wish to become members of NCTM to keep their practice updated.

There are also many other resources related to teaching and learning mathematics that teachers will find very helpful. Your Learning Record coach will be able to direct you to many of these resources.

Teachers New to the Mathematics Learning Record

Student Learning Records in classes where teachers are just beginning to use the mathematics component of the LR will probably present a wide variety of kinds of evidence of mathematical performance. For example, student work in a

* The National Council of Teachers of Mathematics, 1906 Association Drive, Reston, VA 20191-1502, (703) 620-9840, www.nctm.org.

LR may provide some evidence of computational proficiency but very limited evidence of student understanding. Or, teachers may find that their students' records contain little evidence in a particular area of mathematics, for example, Data Analysis. Such findings may occur, perhaps, because the teachers spent little time teaching these concepts or they focused on different concepts from those emphasized in the LR mathematical scales. Teachers find that their beginning experiences using the Learning Record will generate ideas about how to improve overall planning for the next year including which mathematical areas and concepts they wish to emphasize if their students are to boost their achievement levels.

Also, teachers who are beginning to use the Learning Record will naturally vary in their judgments about the level placement of a student's portfolio on the Mathematics Scales. Going through a moderation process will allow teachers to calibrate their interpretations by sharing them with other teachers and discussing how the evidence in a student's LR, supports, or does not support, placement at a particular level. These moderation discussions, over time and across teachers and schools, will result in a consistency of judgments across teachers, schools, and districts, a consistency that promotes fairness for students.