

# USEFUL TERMS/CODES

**ASSESSMENTS**—Screeners, progress monitoring, and other assessment features within the program

**CONCEPTUAL UNDERSTANDING\***—Knowing how the math works and explaining the patterns within mathematical relationships

**COST**—Price of program (per class, site, grade, individual, etc.)

**DURATION**—Number of weeks, days per week, and minutes per session recommended by the program

**EASE OF USE**—Amount of teacher preparation, monitoring, and managing of the program. Also, for students, level of intuitiveness and accessibility of the program.

**GRADE LEVEL**—Grade level(s) of the program

**GROUP SIZE**—Intervention group (small or individual) recommended for the program

**INTERVENTION PROGRAM**—Name of the program (company Instructional Language – which languages do the program use

**KEY VOCABULARY\***—Program uses appropriate mathematical terms (academic vocabulary) in support of language development

**KEY WORDS\***—Tags for searching ease

**MANIPULATIVES AND PLATFORMS\***—List the various manipulatives, tools, or technology platforms included/required for the intervention program.

**PROCEDURAL FLUENCY\***—Flexibly (compose and decompose), accurately, and efficiently using operations

**PRODUCTIVE DISPOSITION\***—Program promotes student buy-in to engage in a way that fosters efficacy with real-world applications.

**STRATEGIC COMPETENCE\***—Student has opportunities to demonstrate multiple ways of thinking

**TECHNOLOGY, TOOLS & MODELS** – The degree that technology, tools, and models are incorporated to build/show understanding

**TRAINING NEEDS\***—Professional development needs associated with program

---

\* See full description on pages 2-4.

**CONCEPTUAL UNDERSTANDING (CONCEPTUAL)**—degree to which the intervention program facilitates comprehension of mathematical concepts, mathematical operations, and important mathematical relationships (see *Adding It Up: Helping Children Learn Mathematics*, National Research Council, 2001, 5). Effective mathematics intervention programs “facilitate discourse among students to build shared understanding of mathematical ideas by analyzing and comparing student approaches and arguments” (*Principles to Action: Ensuring Mathematical Success for All*, National Council of Teachers of Mathematics, Inc., 2014, 10). Note specific ways and to what extent that each intervention program builds the foundational skills and conceptual understandings for the major work of the grade (domain/cluster).

**KEY VOCABULARY (ACADEMIC VOCAB)**—degree to which the intervention program builds mathematics and academic vocabulary by integrating effective language-acquisition strategies that engage students in meaningful learning through individual and collaborative experiences and promote their ability to make sense of mathematical ideas and reason mathematically. Effective mathematics intervention programs build students’ academic vocabulary and uses other language development strategies “to assess and advance students’ reasoning and sense making about important mathematical ideas and relationships” (*Principles to Action: Ensuring Mathematical Success for All*, National Council of Teachers of Mathematics, Inc., 2014, 10). Note ways and specific strategies each intervention program utilizes to support students’ mathematical understanding through vocabulary and language development.

**KEY WORDS (KEY WORDS)**—the intervention program can be described using various key words. *For example*, one-on-one instruction, small-group instruction, whole-group instruction, direct instruction, exploration, problem-solving, skill practice, fact fluency, games, models, tools... (add to list as team identifies others)

**MANIPULATIVES AND PLATFORMS (MANIPULATIVES)**—there are manipulatives, tools, or technology platforms included in the intervention program. List all manipulatives, tools, and technology-related platforms provided with each intervention program.

**PROCEDURAL FLUENCY (FLUENCY)**—degree to which the intervention program builds students’ skill in carrying out procedures flexibly, accurately, efficiently, and appropriately (see *Adding It Up: Helping Children Learn Mathematics*, National Research Council, 2001, 5). Remembering that “the word *fluent* is used in the Standards to mean ‘fast and accurate’. Fluency in each grade involves a mixture of just knowing some answers, knowing some answers from patterns (e.g., ‘adding 0 yields the same number’), and knowing some answers from the use of strategies. It is important to push sensitively and encouragingly toward fluency of the designated numbers at each grade level, recognizing that fluency will be a mixture of these kinds of thinking which may differ across students” (*Progressions for the Common Core State Standards in Mathematics (draft). K-5, Operations and Algebraic Thinking*, Common Core Standards Writing Team, 29 May 2011, 18). Effective mathematics intervention programs build “fluency with procedures on a foundation of conceptual understanding so that students, over time, become skillful in using procedures flexibly as they solve contextual and mathematical problems” (*Principles to Action: Ensuring Mathematical Success for All*, National Council of Teachers of Mathematics, Inc., 2014, 10). Note range of numbers, which operations, strategies, and models each intervention program uses to develop students’ procedural skill and fluency.

**PRODUCTIVE DISPOSITION (DISPOSITION)**—degree to which the intervention program allows authentic opportunities, problem-solving instruction, and provides opportunities for students to strengthen their capacity for logical thought, reflection, explanation, justification, and ability to decide when a change in strategy might be appropriate along their solution path. Thereby, nurturing students’ habitual inclination to see mathematics as

sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy (see *Adding It Up: Helping Children Learn Mathematics*, National Research Council, 2001, 5). Effective mathematics intervention programs consistently engage “students in solving and discussing tasks that promote mathematical reasoning and problem solving and allow multiple entry points and varied solution strategies.” They provide “students, individually and collectively, with opportunities and supports to engage in productive struggle as they grapple with mathematical ideas and relationships” (*Principles to Action: Ensuring Mathematical Success for All*, National Council of Teachers of Mathematics, Inc., 2014, 10). Note ways and extent to which each intervention program fosters students' productive dispositions as described.

**STRATEGIC COMPETENCE (STRATEGIC)**—degree to which the intervention program fosters an ability to formulate, represent, and solve mathematical problems (see *Adding It Up: Helping Children Learn Mathematics*, National Research Council, 2001, 5). Effective mathematics intervention programs “uses evidence of student thinking to assess progress toward mathematical understanding and to adjust instruction continually in ways that support and extend learning” (*Principles to Action: Ensuring Mathematical Success for All*, National Council of Teachers of Mathematics, Inc., 2014, 10). Note ways and extent to which each intervention program fosters students' skill and strategic competence to formulate, representing, and solve problems.

**TECHNOLOGY, TOOLS, AND MODELS (TOOLS)**—degree to which the intervention program supports learning through an integration of mathematical tools and technology as essential resources to assist students make sense of mathematical ideas, reason mathematically, and communicate their mathematical thinking. Effective mathematics intervention programs appropriately incorporate technology, tools, and mathematical models that engage “students in making connections among mathematical representations to deepen understanding of mathematics concepts and procedures and as tools for problem solving” (*Principles to Action: Ensuring Mathematical Success for All*, National Council of Teachers of Mathematics, Inc., 2014, 10). Note which and to what extent each intervention program uses technology, tools, and models to assist students in making sense of mathematics.