Why is rigor a sought-after element in mathematics classrooms around the country? To find the answer, consider what it means to be "career-ready" in the 21st Century. Cutting-edge companies have determined that their goals for the workplace include identifying and completing tasks that require invention, creativity, and teamwork. Colleagues apply pertinent skills based on their deep understanding of a concept to identify and solve problems. Daniel Pink observes in his landmark book, DRiVE, that 70 percent of all job growth is heuristic, or focused on innovative problem solving. This shift in job growth requires a shift in learning, which can be accomplished only if we make a corresponding shift in instruction.

Enter the Common Core State Standards (CCSS) which addresses the content, processes, and proficiencies needed to prepare students for a successful future. Within the CCSS, rigor is defined as "deep, authentic command of mathematical concepts."[3] Adding rigor to program design provides students with the conceptual understanding, procedural skill and fluency, and application of learning in context[4]. **Number Worlds** is proven to develop conceptual understanding and procedural knowledge. Weekly project-based learning modules tie the application of knowledge to conceptual development to ensure that all three facets of a rigorous math curriculum are part of the learning process.

To help students meet this goal, the CCSS cite three aspects of rigor on which to focus: conceptual understanding, procedural skills and fluency, and application.

1. ***C ce al de a di g:*** Concepts must be accessible from a number of perspectives in order to see mathematics as more than a set of mnemonics or discrete procedures. Researchers have investigated the manner in which children construct number knowledge and conceptual understanding of content and have proven that these precursor understandings are required to allow students to build the conceptual understanding they need to handle increasingly complex information and topics[5].

   Hands-on activities with manipulatives are embedded in every **Number Worlds** lesson, allowing students to explore and demonstrate abstract concepts in a concrete way.

   Building Blocks, the result of NSF-funded research, develops students' mathematical thinking through interactive, web-based practice activities. Students progress through research-proven learning trajectories, making connections and building mathematical conceptual understanding.

3.

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