Block Fest Brings Early Math and Science Learning to Southern Idaho Communities

The Situation
Idaho policy makers have been increasingly concerned about the success of students in math and science, two fields critical for today’s technology-based economy. However, research shows that the groundwork for success in these areas is laid in the first five years of life, when children develop the elementary ideas on which more complex concepts are based. The University of Idaho Extension wanted to bring this message of early math and science learning to policy makers, parents, educators, and early childhood professionals.

Our Response
Children’s play can be a natural learning lab for development of early math and science concepts. For example, block play is a context in which children can learn basic math ideas such as counting, equality, patterns, area, and measurement. In fact, research shows that children’s block play is related to later math competence. Early block play predicts math interest and competence in junior high and high school, when the concepts get more complex and difficult to master.

Block play also provides a natural context for exploring the physical world. Like little scientists, children experiment with structures and observe the outcomes of their building efforts, learning about mass, proportionality, weight, and balance.

Block play supports other aspects of development as well, including language as children talk about their structures, and social/emotional development as they build with others and manage the frustration that comes when structures collapse. In addition, children are challenged cognitively as they solve the problems that arise in the construction process.

The University of Idaho Parents as Teachers Program developed Block Fest to provide these learning opportunities to Idaho’s young children from 8 months to 8 years of age, and to teach family adults about their children’s learning. Block Fest is a hands-on building extravaganza for children and parents, featuring five different block types.

The initial Block Fest events were held in Spring 2006 in Boise, where children enjoyed block play in the company of their parents or teachers. As the children built with blocks, the adults learned about block play and early math and science learning from banners on site, and from the take-home book, Block Play Handbook: Learning and Playing with Blocks. In fall, 2006, the exhibit traveled throughout southern Idaho.
**Program Outcomes**

Over the months of 2006 Block Fest served over 3,000 parents and children in communities of all sizes in Southern Idaho. Survey responses showed that parents could see how their children learned through block building—in the words of one parent: “It was a great way to experience some of the learning a child works on every day!” Parents also reported that they learned how block building helps children learn early math and science ideas.

After the Block Fest event, parents were asked to describe their children’s behavior at the event. Parents were especially likely to see behaviors in developmental areas of social/emotional (e.g. acting excited, sharing), science (e.g. predicting, experimenting), math (e.g. counting, adding) and cognition (e.g. focusing, problem solving). Behaviors in the language category (e.g. describing, asking questions) were least likely to be observed by parents. Language, science, math and cognitive behaviors showed increases from the younger (under 3 years) to older (5 years and up) age groups.

Three months after Block Fest parents reported following up on their learning in many ways. Nearly all parents (96%) told someone else about Block Fest, and 78% talked with their child about Block Fest. Most did follow-up reading, perusing the *Block Play Handbook* they received (83%) and checking out the Block Fest website (40%).

Parents increased block use at home, making their blocks more available (70%), playing blocks with their child (89%), building with objects instead of blocks (61%), purchasing blocks (31%), and making blocks (28%). Parents also took the science/math message home, using more math/science words (44%), seeing opportunities to talk about math and science ideas with their children (55%), and finding math and science in everyday activities (72%).

Teachers were also pleased with the impact of Block Fest on their classes. As one Gooding teacher reported, “It was awesome. Kids still talk about it (2 months later). The big foam blocks were awesome!” After Block Fest, the teacher made more time for block play in class—“After Block Fest, the kids were more engaging with the blocks here in class.”

In summary, evaluation results show that Block Fest was a hit with the kids, and that parents and teachers saw the children engage in challenging cognitive and social activities, including math and science concepts and behaviors. Parents learned at Block Fest as well, increasing their understanding of early math and science learning, and becoming more aware of the math and science in everyday events. Even three months after the event, the lessons of Block Fest were still strong in parents’ thoughts and in their activities with their children.

Block Fest continues to travel the state, heading to northern Idaho in spring 2007. You can learn more about Block Fest at [www.blockfest.org](http://www.blockfest.org).

Block Fest was brought to Idaho counties by University of Idaho Parents as Teachers Educators:
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