

MathCamp

SPECIAL REPORT

SUMMER 2010

MathCamp is a four-day overnight camp designed for middle school students who show a significant need for a positive learning experience and a deeper understanding of concepts in science and mathematics. Teachers can recommend up to two students whom they feel meet such criteria. It is an honor for students to be selected for MathCamp, and since its inception in 2007, it has impacted hundreds of middle school students and continues to experience positive growth and recognition each year.

MATHCAMP 2010 PARTICIPANTS

- ◆ 115 TOTAL CAMPERS
- ◆ 4 MIDDLE SCHOOL CAMPS, 2 ALUMNI CAMPS
- ◆ 272 MIDDLE SCHOOL STUDENTS RECOMMENDED BY TEACHERS
- ▲ 58% OF 2009 CAMPERS RETURNED FOR ALUMNI CAMP



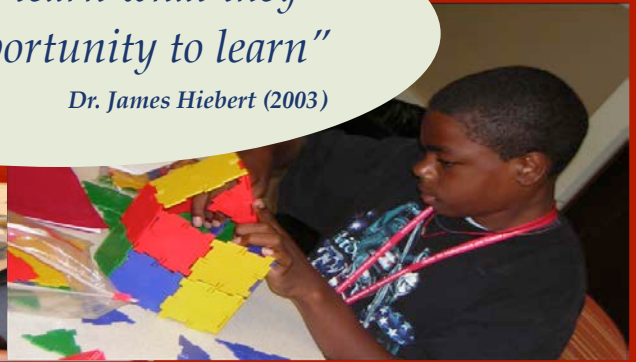
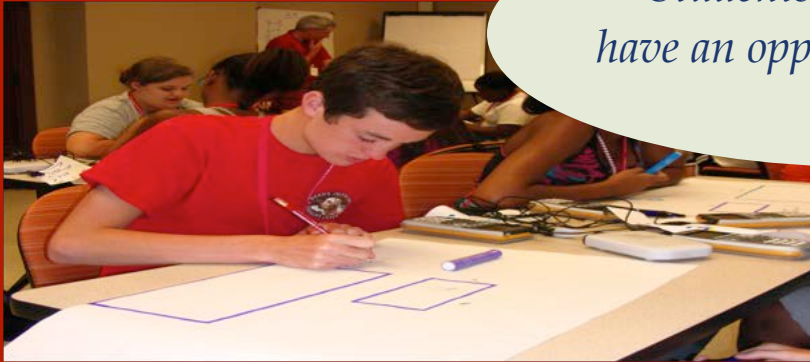
"This camp showed me the possibilities in math."



Providing Opportunities...

"Students learn what they have an opportunity to learn"

Dr. James Hiebert (2003)



The goal of the tasks and activities of MathCamp was to provide opportunities for campers to explore mathematics in ways they might not have experienced before. Both first-year and alumni camps offered out-of-classroom learning opportunities that campers might not have experienced during the school year.

~Geometry & Measurement~

First year math campers:

- ▲ created and described designs using pattern blocks
- ◆ performed reflections to expand their designs
- ◆ explored perimeter, area, and properties of two-dimensional polygons with geoboards
- ◆ built and named polyhedra with polydrons
- ◆ discovered Euler's Formula with their polyhedra



"I learned Math can be fun!"

"I learned to be more observant."



~Algebra & Number Sense~

Alumni campers engaged in solving complex problems such as the Locker Problem, Problem of 9's, Five Digit Challenge, and Counting Cubes. They also explored number relations, patterns, and measurement in solving Jesse's Train and the String Task through explorations with Cuisenaire Rods.



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Making Connections...

Science and mathematics go hand-in-hand. MathCamp provided opportunities for campers to recognize and investigate some of the ways in which math and science are related. Connections were made to science through activities such as a Solar System Walk, Geocaching Explorations, and Physics Lab Demonstrations. Technology was incorporated and all campers were challenged to think critically, problem solve, and justify their ideas.



~Solar System Walk~

First year campers investigated the reality of the enormity of the solar system by using a bowling ball to represent the sun, calculating an appropriate scale, and using the scale to measure the distances between planets with their steps. Throughout the walk, they discussed properties of each planet and current issues in space exploration.

~Geocaching Explorations~

Campers in both camps engaged in learning how global positioning systems (GPS) use data from three different satellites to pinpoint coordinates for given locations. Divided into teams, the campers solved problems and enjoyed a geocache scavenger hunt while learning about the mathematics involved in global positioning.

~Physics Demonstrations~

The physics demonstrations were a favorite among many of the campers. Campers experienced a series of fun demonstrations that were designed to peak interest in science through unexpected phenomena such as: shooting ping pong balls through coke cans, freezing various objects with liquid nitrogen, and exploring properties of lasers.



The Lasting Effect...

The goal of MathCamp is to allow students to have a positive experience in learning mathematics while at the same time deepening their understanding of mathematical concepts. As camp concludes, students leave with an increased confidence and a new attitude about a subject matter that they may have disliked just a week before.



~CMSE Mission~

Improving mathematics and science education in Mississippi by fostering interaction between academic and K-12 education communities, supporting the implementation of research-based methods in the classroom, and promoting interest in science, technology, engineering, and mathematics (STEM) fields.

To find out more information about our middle school outreach programs, please contact us.

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