MSRI · Berkeley
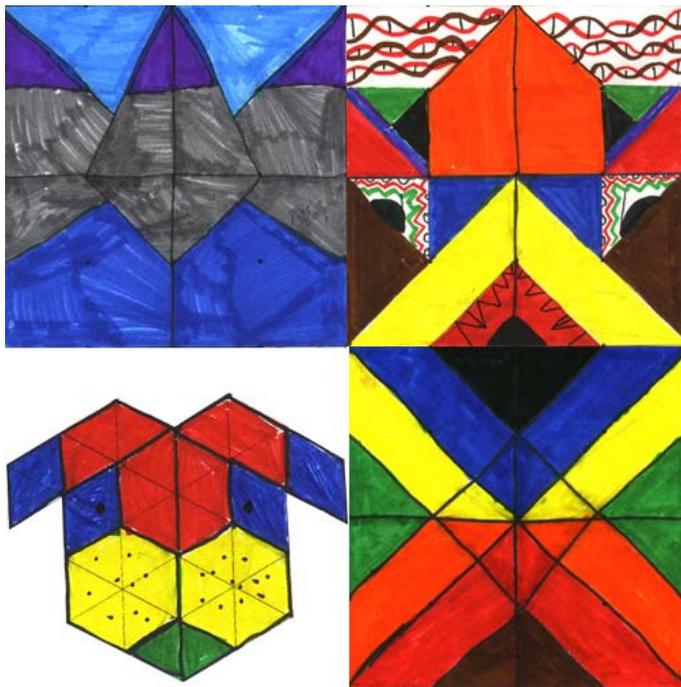**University of California**

MSRI Evans Lecture
Monday, April 10, 2006
60 Evans Hall, 4:10 PM

"New Ideas in Topological String Theory"
Albrecht Klemm
(University of Wisconsin, Madison, MSRI)

Mirror Symmetry; Ms. Surber's 4th grade class, Barron Park School

Abstract: After reviewing the definition of cohomological string theory we discuss the applications of classical mirror symmetry and integrable structures to quantum cohomology and to the calculation of sympletic invariants. We will then focus on the physical implications of the emerging stringy geometry to old problems of quantum gravity. In particular to topology changing transitions and to the counting of the entropy of supersymmetric black holes. We finally discuss the wave function interpretation of the topological string partition function.

This lecture is part of the MSRI Evans Lecture Series of talks given by MSRI Researchers.

Graduate Students and Postdoctoral Fellows are particularly urged to attend these lectures.