Project MIST (Orgill/Crippen)

Project MIST (Mathematics Integrated with Science using Technology) is a 3-year teacher professional development project. The MIST partnership consists of three entities that collaborate via the UNLV Center for Mathematics and Science Education (CMSE): the Curriculum and Professional Development Division of the Clark County School District (CPD/CCSD), the UNLV College of Education and the UNLV College of Sciences.

Project MIST seeks to provide teacher development to integrated teams of teachers from fifth through eighth grades. Annually, Project MIST will provide a 2-week summer Institute for approximately twenty-five triads of teachers. Each triad will consist of a middle school science teacher, a middle school math teacher, and an elementary school teacher. Estimation & Classification, Constancy & Change, and Causation & Correlation are the annual themes for the summer Institutes. The participating teachers, recognized as MIST Fellows, will continue with graduate-level coursework during the academic year. Fellows will gain highly qualified status by earning graduate credits in mathematics/science and education. Project goals include development of a professional learning community, reformed teacher practice, and improved content knowledge for both teachers and their students.

The theoretical model for Project MIST includes ten empirically supported guiding principles. Curriculum units will be grounded in the lives of students in the Las Vegas valley and use a series of driving questions to engage learners in a process of using evidence to support their knowledge and beliefs. Instruction in MIST classrooms will use multiple representations of data with technology to foster conceptual change. Supports will be included to accommodate all learners, with special attention given to English language learners.

The professional development model for Project MIST includes the innovative use of real-time video conferencing during the academic year for all participants. Participating teachers will use the academic year to design and implement classroom-based action research projects in order to disseminate and validate the MIST principles. The evaluation of Project MIST will include documenting changes in knowledge, dispositions, skills and behaviors for both teachers and their students.