

IMAGES

MATHEMATICS

IMAGINATION

The fundamental problem facing our country is failed communication and the consequent lack of understanding. We used to bemoan bumperstickers and now we blame Twitter. This project will empower our students to tell their stories using cell-phone photographs and computer-generated imagery, animations, and interactive worlds. Along the way, they will learn mathematics and come to appreciate its power and beauty.

IMAGES, MATHEMATICS, IMAGINATION will be a digital library of resources giving our students new powers of visual expression and communication. We use the computer programming environment Processing. Processing was developed by the visual arts community. Its “Hello World” programs are short – just a few lines create dramatic imagery, animations, and interactive worlds. Processing is free and well-supported. It runs on Windows, MacOS, and Linux. <http://processing.org>

This talk is intended to kick-off a collaboration. The formal presentation will be short and followed by open discussion. The presentation will include a brief demonstration of Processing and three examples of the kinds of things our students can produce using *IMAGES, MATHEMATICS, IMAGINATION* to convey their messages about themselves and their communities, to celebrate diversity and teamwork, to build energizing bridges in place of walls that confine those within at the same time they exclude outsiders. The same tools can also be used to create wonderful birthday and holiday presents. And, oh yes, there is a lot of math at all levels – the more you know, the more powerful your creations. The three examples are:

- Using digital tricks to show how different people see different things in the same setting – for example, dragging an avatar of a family with a recently unemployed father, still employed mother, and two still well-dressed children into a brightly-colored photograph of one of their favorite places, causes the scene to go black-and-white except for the sign with the now prohibitive prices.
- Virtual Kaleidoscopes – celebrating diversity with pebbles of people pictures creating striking imagery in which mirrors replace barriers.
- Photomosaics. This project is particularly suitable for classes. They take their own individual photographs that will become the tiles in a large mosaic – metaphorically, showing the powers of teamwork.