Math Trail Assignment

One of the purposes of teaching geometry in the elementary/middle school is to help children acquire abilities to be used in describing, comparing, representing, and relating objects in the environment. The development of such abilities relies heavily on the kinds of experiences children have with real objects and on the ways which they respond to these experiences. Many geometry experiences should involve unstructured play activities in which children are encouraged to experiment, to find out, and tell "why and what".

One possibility is for teachers and students to explore their communities along the path of a "math trail". Students create math problems based on what they find. The concept originated with Harlem teacher Kay Tolliver.

American students can send their trail into a Math Trail website http://www.nationalmathtrail.org/ along with photographs, narratives, drawings, videos, sound clips - anything that can be digitized. Canadian Math Trails can be submitted to http://www.brocku.ca/cmt/.

Several years ago, SFU professor Malgorzata Dubiel devised a Math trial in Beacon Hill Park. The URL is http://britton.disted.camosun.bc.ca/geometry/mathtrail.pdf. A team of three Camosun students updated the trail in 2008 and added several live photographs.

Other Camosun students, some working alone, created the trails which you can access online from http://britton.disted.camosun.bc.ca/geometry/mathtrail.html. You will also find therein links to excerpts from the math trail video shown in class and to quality trails that have been submitted to either the American or Canadian Math trail websites.

You are required to create a math trail for elementary or middle school students as part of this course.

- You may work alone or as part of a team of either 2 or 3 students. More variety and comprehensiveness is expected of teams.
- Trails should be presented using Microsoft WORD and must include digital photographs.
- Please indicate the age group for which the trail is intended.
- Remember to concentrate on unique features of the area being explored.
- You should have clear objectives in mind.
- Include a variety of questions of both a numeric and a geometric nature. Open questions can be much more challenging than those that have only one possible answer. Include an answer key where possible.
- The trail should be well planned and organized. The inclusion of a map is recommended.
- Teams of 3 students must include video which the team can upload to *YouTube*. Please include corresponding links in the WORD source document.
- Submit a printout of your trail along with the name(s) of the creators.
- Submit a CD, DVD or flash drive containing the WORD document and any videos.