Finite Math Tag
geotagged math maps

Tim Chartier
Department of Mathematics

tichartier@davidson.edu
Why learn math?
WE ALL USE MATH EVERY DAY

to forecast weather

to handle money

we also use math to analyze crime

to uncover patterns

to predict behavior...

FRIDAYS 10/9c

Everyday Math

To aid in answering this question, my Finite Math class explores such applications as:

- Scalable fonts
- Sports ranking
- PageRank
Change perspective

Finite math is where students get a good story to tell of math.

Picture credit: http://www.kenston.k12.oh.us/khs/student-life/optical-illusion/img/impossible.jpg
Math maps

• If math is everywhere let’s learn communicate that the local school children.
• Groups of 2-3 collaborate with local teachers to create math map in the town of Davidson.
• Each map contained 6-8 sites.
Math maps

• Each site contains an activity appropriate for that grade level.
• The sites are geotagged, allowing them to be found via smartphones or computer and in any order.
Call for proposals

- Aided by Community Service office.
- Needed 11 cooperating classrooms.

Picture credit: http://www.schley.net/jim/?p=1093
Collaborators

The 11 participating classrooms came from:

- Ada Jenkins Center
- Community School of Davidson
  - Kindergarten, 2nd, 4th, HS geometry
- Davidson Day
  - 3rd, 4th, 7th, middle school geometry
- Davidson Elementary
  - 1st, 4th
Communication

After selecting the classroom partners, I communicated the teachers regarding:

– follow up questions

– schedule (start and end date)

– to define clear expectations regarding work
Group work

- Students self-selected groups of 2-3.
- In the end, I filled in groups with additional students.

Picture credit: http://www.sonnyradio.com/teamwork.html
Schedule

• Week 9 – Topics presented and assigned
• Week 10 – Groups meet with teacher
• Week 11 – Proposals due
• Week 15 – Class visits
• Week 16 – Posts due
Blog not a paper

• Note this entire project was done and submitted online.

• There was no paper, per se. The students completed their activities and also entered individual reflections.
Digital Sandbox

- This was part of a Digital Field Scholarship site.
- In 2012-13, the site supports a variety of institutions and NITLE projects.
- There are plans for a larger initiative in the future. For more info see: https://sge.lclark.edu/dfs/

Picture credit: http://www.idea-sandbox.com/bigdig/images/sandbox_graphic_baby_blue.png
Computer backup

- An important step was geotagging the sites.
- Note, if GPS incorrectly geotagged a site, it could be fixed on a computer.
Computer tagging

• Note, geotagging in the field requires a data plan with a phone or tablet.

• As such, the ability to tag with a computer can be important.
Teacher feedback

- Projects worked best with teacher input and feedback on the projects.
- Note, this isn’t easy given teachers’ busy schedules.
Class visits
Peek interest, plz

- Students worked hard to engage their students.
- Several groups made iMovie trailers.
- One group was given an hour and then asked to go another 45 minutes given the students interest.
Second round

• Many students commented specifically on seeing math in new ways.
• I’ll be doing the project again this term to engage a new class and create new stories.
Digital Sandbox

• For more information, visit: https://sge.lclark.edu/dfs/

• You can also view the Davidson math maps at this site.