An Introduction to TeachOSM

Teaching Geography with OpenStreetMap
Agenda

• What is TeachOSM?
• Why do we need TeachOSM?
• Highlights
• Six Reasons to use OSM to teach geography
• Summary
TeachOSM: A Resource for Educators

Getting Youth Involved

Photo: middle-school school students learning to map. Credit: MaptimeSF/Lyzi Diamond
What is TeachOSM?

- TeachOSM is a growing resource for educators at all levels to introduce open source mapping in their classrooms and training sessions.

- TeachOSM offers modular lessons that teach basic geographic concepts through applied mapping on OpenStreetMap.

- TeachOSM has resources to help instructors to identify, assign, manage and grade a mapping assignment.

Photo: Mapping peaks using GPS. Credit: SEJohnson
Why do we need TeachOSM?

- Provide tools for educators not found in other OSM learning materials
- Demonstrate the utility of OSM to teach geo-literacy
- Help students/young adults engage with the landscape
- Build a pipeline of talented mappers to sustain the project
- Create opportunities for meaningful citizen engagement
What does TeachOSM do?

- Established a web site
- Create repository of case studies
- Planned half-day workshop for educators
- Outreach to teachers, educators, youth leaders
- Established micro credential initiative to award credit for service hours

Photo: middle-school school students learning to map.
Credit: SEJohnson
For educators…

• Basic map editing skills

• How to manage student accounts

• Organizing & managing your mapping event

• The Tasking Manager, for assigning blocks of work

• Quality control, assessment, grading

• Ready-made projects for teachers to adapt

Photo: Mapathon, Spring 2014.
Credit: Brian DeRocher
For Students…

- Teach basic digital mapping skills
- Provide opportunity for vocational learning
- Offer service learning opportunities
  - Humanitarian OpenStreetMap Team (HOT)
  - MapGive
  - MissingMaps
  - DC Great Streets
- Cultivate geo-literacy through guided mapping projects

Photo: middle-school school students learning to map.
Credit: SEJohnson
GeoBadges: Micro-credentials for Service Learning

• A new initiative to give credentials to students and teachers for contributions to OpenStreetMap

• Expectations:
  • Contribute to the map & foster community
  • Be a Resource for Peers
  • Develop an Understanding of Basic Digital Mapping Constructs
  • Contribute to Community Mapping Goals (local, HOT, MapGive, MissingMaps)

• Web: http://geobadges.org/
Highlight: TeachOSM and the Georgia Avenue Project

Training Young Adults to Map
Georgia Avenue Mapping Project

• Youth Ambassadors used Georgia Ave data gathered for street-level survey

• We trained ~15 Youth Ambassadors in how to edit in OpenStreetMap

• Results:
  • Over 270 features added to the OpenStreetMap
  • Survey data visible on the map!

• [http://wiki.openstreetmap.org/wiki/Georgia_Avenue_Youth_Ambassadors_Mapping_Project](http://wiki.openstreetmap.org/wiki/Georgia_Avenue_Youth_Ambassadors_Mapping_Project)
Using the OSM Tasking Manager to control workflow

20 students who are part of the city’s Summer Youth Program are working with the Georgia Avenue Community Development Task Force, Georgia Avenue Business Alliance and MOMIEs TLC, a local educational nonprofit, to learn about businesses, entrepreneurship and local history. Mapping DC is helping them collect and put the data it on OpenStreetMap so everybody can use it going forward. Please map the buildings, starting with those facing Georgia Avenue.

The map data will also be used for a local business directory and in a business needs assessment survey in the area.

Instructions
Highlight: HOT Indonesia

University Outreach Program
University Outreach & Contingency Planning

- Focus is disaster preparedness and contingency planning for vulnerable areas
- Working with local communities to identify & map exposure and risk
- Using QGIS & InaSAFE plugin for downstream analysis
- Over 4 years, conducted 86 trainings, 2300 people trained, ~2m buildings, ~14500 schools
Why TeachOSM?

Reasons to Use OpenStreetMap to Teach Geography
OpenStreetMap Gives Students Immediate Experience

- Direct Learning - Young adults gain direct experience of space, place, and location
  - Geography at a 1:1 Scale
  - The terrain is the map
  - Nurture and understanding of how to read the landscape
OpenStreetMap Reinforces Social & Historical Literacy

- Provides meaningful engagement for children that can broaden academic & career options
  - History-shaping events often happen at certain places for geographic reasons.
  - Contributing to OSM, through site surveys, editing, & meeting other citizens, helps us understand geographic processes that underpin social events.
OpenStreetMap Supports Collaborative Learning

- Mapathons help students establish positive relationships with other mappers in the community
  - Collaborate with your fellow citizens to record features of interest
  - Share observations about your community
  - Give visibility to community landmarks
OpenStreetMap Provides Opportunities for Service-based Learning

- Opportunities to engage in ongoing community service projects & service learning engagements
  - Contribute to humanitarian relief efforts through Humanitarian OpenStreetMap Team
  - Use MapRoulette ‘micro-tasking’ to help improve map quality
  - Give young adults a meaningful stake in maintaining map data in their neighborhood
OpenStreetMap Supports Self-directed Learning

• The open platform encourages self-guided learning and allows students to challenge themselves.

• Mapping projects encourage collaboration & teamwork

• Students learn how to think critically about geographic features and how to model their world.

• Active mapping nurtures the young adult’s natural inquiries into the world.
OpenStreetMap Requires No Special Resources

- No software required - works in the browser
- No permission required - OSM is a do-acracy: DO IT!
- Data are free and can be exported for downstream use in desktop GIS packages (e.g. QGIS, ArcGIS)
- No fees, licensing charges, royalties, paywalls, subscriptions, etc.
Sample Ideas for Projects

• Conduct a street survey in your neighborhood:
  • http://teachosm.org/en/cases/DCGreatStreets_survey_casestudy/

• Map for disaster relief/preparedness:
  • http://mapgive.state.gov and http://missingmaps.org/

• Add historical features to OpenHistoricalMap:
  • http://ow.ly/MfhZw

• Map local food resources:
  • http://teachosm.org/en/cases/farmers-market/

• Start a student mapping society:
  • https://www.facebook.com/GWHMS
Getting Involved

- Where do I get started?
  - Subscribe to the TeachOSM mailing list
  - Send an inquiry to info@teachosm.org

- How do I contribute?
  - Draft a case study for the web site (http://teachosm.org)
  - Help refine our materials

Photo: middle-school school students learning to map.
Credit: MaptimeSF/Lyzi Diamond
Summary

- As an open freely editable map of the world, OpenStreetMap is an excellent platform for teaching geography.

- OpenStreetMap offers students geo-literacy, social engagement, service learning, and independent learning opportunities.

- OpenStreetMap is free and requires no special equipment.

- Use TeachOSM and help us make it better.