Mapping the Surroundings Yourself - Outdoor Mapping Event

A guide for teachers and instructors

Figure 1. Early practice for those who want to become a "master mapper"! (Source: EducOSM.xyz 2019)

Overview

Goal

This is not a worksheet but a collection of hints and tips for teachers and instructors to organize a successful outdoor mapping event (sometimes called "Mapping Party") with students and enthusiasts (called "participants" here).

Audience

Teachers and instructors.

Please also read the corresponding worksheet "Mapping the Surroundings Yourself - Outdoor Mapping Event" for students and enthusiasts.

Introduction

Technology is an integral part of our everyday lives. This also includes maps and GPS navigation apps. Many people think of Google Maps, a school atlas or national maps such as the federal map viewer (map.geo.admin.ch). There are many alternatives - and one of them is OpenStreetMap (OSM).

The advantage of OpenStreetMap is that the data belongs to the users (the community) and not to a company or an authority. However, this also presupposes that the data is supplemented and kept up-to-date by the users.

It seems reasonable to us that the participants develop an awareness that the card belongs to them or to all of us and that we are all responsible for its quality. Participants should use OSM and actively participate in the improvement, for example on holiday when the area is insufficiently covered.

And cartography is neither boring nor difficult, so anyone should be able to learn it. One way to make cartography better known is to include it in lessons, such as geography or history. An outdoor mapping event should give an insight.

The checklist below contains a short list of the topics that are important to launch a successful event. It also gives an overview of the timing of the event.

Checklist and Scheduling

The following is a checklist for teachers and instructors to prepare and carry out an outdoor mapping event:

1. Study of the documents
2. Execution of a test run
3. Integrating the data into OpenStreetMap
4. Preparations (e.g. defining groups, changeset comments, etc.)
5. Divide area and print map sections (part of preparation)
6. Introduction of the topic for the participants (part of the preparation)
7. After the event has taken place, evaluate and conclude the event.

The topics are discussed in more detail here, section by section.

Before that we show a table as an overview of the time schedule of the event.

There are different possibilities, depending on whether you are planning an outdoor mapping event within the framework of (A.) regular lessons, (B.) a project week at the school, or (C.) a project week outside the school. The following estimated timetable is given below:

Stage	**A. Regular lessons**	**B. Project week at school**	**C. Project week outside school**
Introduction	2 - 4 Lessons	4 Lessons	4 Lessons
Data collection (outside)	3 Lessons	2 Days	2 Days
Data acquisition (on the computer)	3 Lessons	1 Day	1 Day
Writing report	-	-	0.5 Days
Conclusion	2 Lessons	0.5 Days	0.5 Days

Study of the documents

Scheduling Overview.

Before you can successfully run an outdoor mapping event, you need to be familiar with the topic of OpenStreetMap. It would be a good idea to pick up the teaching materials from OpenSchoolMaps a few weeks in advance and study them. The documents contain both theory and exercises to solve. Be prepared for possible questions from participants and take notes. If something is not completely clear, one can inform oneself in the internet. This is a good entry point OSM.ch. However, it should be possible to study the documents on one's own.

The "Swiss OpenStreetMap Association" (SOSM) offers the possibility to ask questions if you are stuck: Contact.

Execution of a test run

Conscientious preparation includes not only studying the documents, but also carrying out a test run. Use a way home or go for a walk and apply your newly acquired knowledge. Explore the surroundings from the perspective of a cartographer.

Take pen and paper with you on your walk. Use the map tools uMap or Field Papers as described below. Research which objects the participants could map (see below for more information).

There would also be the possibility to use the smartphone, for example with the app "OSMTracker for Android". However, this is associated with more organizational and explanatory effort and is subject to constant technical change.

Stop the time and see how long it will take you to explore the environment and how much information you can gather during this time.Then it will be easier for you to estimate how much time you are planning for the participants.

Make sure you schedule enough lessons. Mapping can take longer than you think, so plan generously!

Integrating the data into OpenStreetMap

After you have collected your data, go to OSM.org and enter your data there.

If you do not yet have an account with OpenStreetMap (OSM), now is the time to create one. See OpenSchoolMaps under "Teaching Materials" for the worksheet "Edit OpenStreetMap" for further explanations and the "OpenStreetMap Tagging Cheatsheet".

Again, it might be an advantage if you look at how much time you need. Add a little extra to your measured time because participants are probably not as fast as you and the differences within the class can be considerable.

OpenStreetMap always requires a so-called "changeset comment" before saving the edited data. An

example of a changeset comment is *House numbers Bahnhofstrasse added* or *Outdoor-Event School X 2019*. In the following chapter "Preparations" we come back to this comment.

Show your work to the participants as an introduction to the topic. This will give you a first impression.

Preparations

Specify objects to map: There are more than a thousand(!) object types in OpenStreetMap (so-called 'tags'), so you should suggest a selection of objects to the participants. In the corresponding worksheet "Mapping the surroundings yourself..." for students and enthusiasts there is a chapter "What can be mapped at outdoor events". OpenSchoolMaps also offers a multi-page "OpenStreetMap Tagging Cheatsheet". If you think that most of the "nearby" objects are already registered in the selected environment and you don't really know what to do, you can contact the Swiss OpenStreetMap Association at the above mentioned contact.

Set changeset comment: Before saving the edited data, OpenStreetMap always requires a so-called "changeset comment". For an event to be evaluated, it is important that everyone uses the same changeset comment. Specify which changeset comment all should use. An example of a changeset comment is *Outdoor-Event School X 2019*.

Define date: For the execution date is not compelling - but naturally desirable - if beautiful weather is announced, since it concerns an outdoor activity. Possibly an alternative date could be set.

Plan group division: The participants should form groups to carry out the event, e.g. groups of two. This makes it more exciting for the participants and easier for the teacher or instructor to organise. Each group is to be assigned an area, as explained below.

Set up e-mail addresses (if not already done): To use services like OpenStreetMap you need an e-mail address. And for this use one must be older than 13 years according to Internet right. For 13- to 16-year-old participants, a parent or person authorized by the parent (a teacher, a debt administrator, or an instructor) can manage user accounts (source).

There are many ways with which e-mail addresses participants should register, if they have not already registered themselves, so that we cannot make a recommendation here.

At the following web page you will find some tips on how you can set up e-mail addresses for the group while respecting privacy and data protection.

Announce event as a summary: Also OpenStreetMap knows rules - similar to a common or a school place. For example, it is important that those who edit can be contacted. An event like this is called organized editing and there are these "Organized Editing Guidelines". We have shortened these guidelines for you.

In accordance with the guidelines, you will be asked to fill in the following information and e-mail it to the following contact: SOSM.

Summary of the Outdoor Mapping Event:

1. Name of the event: ... *(e.g. Outdoor Event Rappi)*
2. Date: ... *(e.g. 2019-06-11)*
3. Changeset Comment: ... *(ca. 50 characters! e.g. Outdoor-Event School X 2019)*
4. Instructor (coordinator): ... *(e.g. Username Geonick)*
5. Participants: ..., ... *(e.g. Username Geonick, Username2, ...)*
6. Goals: ... *(e.g. Map the surroundings of X)*

Infrastructure and consumables:

- There should be a room available with enough computers with access to the Internet to integrate the collected data on OpenStreetMap.org.
- The following chapter explains how to create printed map sections.
- Procure any documents for the card notes.
- Enough writing materials.

Please also note the checklist for preparation for the participants in the corresponding worksheet for students and enthusiasts.

Divide area and print map sections

The area planned for the event must be narrowed down so that the participants do not have to cover too great a distance.

It also makes sense to divide the area into smaller areas (so-called "perimeters") and assign them to groups. This does not map the same area twice.

Two web applications are particularly suitable for area division: uMap and Field Papers:

- uMap is a map editor with which you can draw any area. On OpenSchoolMaps there is a teaching material "Create a map with uMap".
- Field Papers" is a specialized web application that allows you to create map sections and upload the notes made in the field so that you can see them directly when editing.

If you choose uMap, you can skip the following explanations on Field Papers and make sure that there are enough maps printed for all groups.

"**Field Papers "** is a web application that allows you to create a map from OpenStreetMap, print it out and add your own notes to it. When the notes are recorded on the card, they can be photographed (or scanned) and uploaded back to Field Papers. After the map is uploaded, you can call the OpenStreetMap editor iD directly with one click and see the notes as a base map. Here is a example where you can see a link that calls the editor with parameters. Now you can capture the data in the OpenStreetMap iD-Editor and see the photographed notes in the background.

For Field Papers you need a computer, a printer with A4 paper and a digital camera (e.g. smartphone-camera).

Below is a summary of the procedure with field papers:

1. Go to Field Papers.
2. Register if necessary.
3. Give the map a name and navigate to the area you want to map.
4. Print the maps ("Atlas").
5. Go outside and make a note of what you see.
6. Back at the computer, either just look at the paper notes as an aid;
7. or take a photo of the paper notes (also scanning goes) and upload the photo or scan to Field Papers.
8. Start the iD-Editor directly with the weblink to Field Papers.
9. Capture the data with the OpenStreetMap editor.

Visit Field Papers' website and the OSM Wiki for more information.

Introduction of the topic for the participants

Before you divide participants into groups and send them off to explore the environment, you should introduce them to the topic. This is because the level of knowledge within the class/group in the field of computer science can be very high and not everyone knows what OpenStreetMap is and what its purpose is. It is best to prepare a short presentation and present everything you have learned and know in the documents. Take time to clarify open questions and make sure that the participants have understood everything.

Evaluate and complete event

At the end of the event the participants should evaluate their results and present them to everyone. The evaluation can either be done individually or per group. The evaluation includes before-and-after comparisons of the map sections, statistical evaluations and personal reflection. The presentations can of course be graded if desired by the instructor. Instead of a presentation one could also arrange a kind of documentation of the work and possibly grade it.

After evaluating the event and presenting the results, it would also be useful if you were to draw a conclusion: What was good? What was not so good? What can you do better next time? What did the class learn? You could record these findings in a report.

The changeset comment that you have set and that the participants (hopefully) have given while editing can be used to make an analysis of the work done. The changeset comment can be entered in the following web application, where you will get statistics (over the last 30 days): https://resultmaps.neis-one.org/osm-changesets?#8/46.856/8.405 . With "Search for a specific Text" you can e.g. enter "Switzerland" for a test.

Feedback on the event to the initiators of OpenSchoolMaps would also be great: see

OpenSchoolMaps > "Further teaching ideas".