Intro to QGIS: Make a Map

The task for this exercise it to make a map of active Rodent Incidents in the City of Boston

The goal is to learn how to use the features of QGIS Desktop, including adding data, projecting, running some basic geoprocessing, and using the print composer.

1. Open up a new QGIS Project.
2. Download Data:
    http://data.graphicarto.com/maptime-qgis.zip
3. Unzip data
4. Add the following two layers:
    o   Layer → add Vector layer → Boston Neighborhoods
    o   Layer →Add Delimited Text Layer →Rodent Activity
5. Project
    Use Massachusetts State Plane - Mainland Zone – Meters (already set, but just check)
6. Symbolize your Data!
    Right click and go to Properties -> Style
    Play with the Settings
7. Basic Geoprocessing
    Try a few geoprocessing tasks
        Perhaps Buffer around Rat Incidents
            Vector→Geoprocessing tools →Buffer
                Make sure to check dissolve buffer results
        Now use Point in Polygon to determine Rat Incidents by Neighborhood
            Vector→ Analysis Tools→ Count Points in Polygon
                (may have to update settings in processing to ignore geometry
                errors)
8. Add basemap layers
    Open Layers Plugin and add an OpenStreetMaps basemap!
    Download Openlayers plugin
    → Web→Openlayers
9. Spatial Join
    Add → vector layer →other data → census block shp
    Go to Vector ‣ Data Management Tools ‣ Join attributes by location
    Input layer count layer → join layer…. census2010
        Select all geometric predicates
        Run
10. Compose your Map
    Using the Print Composer!
        Project → new print layout → add item
    Add a Legend, Scale Bar, Data Sources, etc.
11. Export and Save

Some ideas to try:
 Make a map of the neighborhoods with the highest number of rat incidents
 Map all areas near a rat incident
 Map Rat Incidents by type and date
 Or find some other data, add it, and combine!

Adapted from:
http://duspviz.mit.edu/
DUSPviz is an initiative of MIT's Department of Urban Studies & Planning