COMPASS

Massachusetts 4-H Foundation

FOSTERING YOUTH DEVELOPMENT

4-H'ERS MAP THE PAST TO PREPARE FOR THE FUTURE

Newton 4-H Club's mapping project creates a public resource while teaching about history, research, and technology skills.

Do you know what GIS is? Two years ago, the eight 12-year-old members of the Plant a Smile 4-H Club in Newton didn't know either. Today, the Club is using GIS to improve their community.

GIS, or geographic information systems, is a computer program that collects and displays data, helping create detailed and informative maps. In early 2013, Plant a Smile received an ArcGIS grant and software from ESRI, a geographic technology company. It was just the beginning of what has become a multi-faceted adventure.

To learn about GIS, Plant a Smile turned to the pros. The Club visited the Arnold Arboretum in Boston where members met with the Arboretum's Applications Programmer. She showed the club members how the Arboretum uses GIS

to map over 15,000 plants. The 4-H'ers learned how to use GIS and experimented with the Arboretum's interactive, GIS created, map.

The club's first treasure hunt was at the Newton Cemetery, home to one of the first Civil War monuments in the country. Some of the Civil War soldiers listed on the monument are buried at the Newton Cemetery, yet little was known about them, or even where exactly they were buried. That's where Plant a Smile came in.

First, the 4-H'ers scoured the cemetery to find the gravesites of the local soldiers. Using GIS, they took the longitude and latitude of each monument. Then, they entered the information online, onto an ArcGIS map.

ROCKETS TO THE RESCUE!

Along with their rockets 4-H members across Massachusetts rose to the National Youth Science Day Challenge. This year's event challenged students to build and launch their own rockets. Along the way they learned about rocket science and aerospace engineering.

4-H groups across the state joined in, including Leominister 4-H (far left, center top) Worcester County 4-H at WPI (center bottom), and Thunderhill 4-H (below).

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Next, it was time for research! The club headed to the Jackson Homestead, a museum that was once a part of the Underground Railroad. There, they learned the difference between primary and secondary resources. The members collected information from old documents and even read letters sent home by Civil War soldiers.

Back online, the 4-H'ers linked each gravesite on the map to the history of the individual soldier, battles they fought in, their dates of death, and branches of service. The result was a Newton Cemetery map accessible to the public. Now anyone can tour the cemetery and learn about the local heroes buried there.

Plant a Smile's adventure in GIS is just beginning. Currently, they're helping the Newton Cemetery map over 100 trees located on the grounds. Once they identify the varieties, the cemetery will be eligible to become a level two arboretum.

Newton Cemetery

Private Leopold Hawkes

U.S. Army, Company K, MVM. Infantry, 32nd Regiment

Date of Death: July 2, 1863

Notes:
Died helping wounded comrade off field at Gettysburg PA, 19 years

Zoom to

Plant a Smile created a map accessible online of each of the Civil War Soldiers' gravestones, along with information on each person.

To see the map, visit www.arcgis.com and search for the "Newton Cemetery Civil War Map"