

Richard A. Shields Elementary School Fourth Grade Class and Geographic Information Systems (GIS)



Here the students of Ms. Friends and Ms. Cunningham's class are learning all about maps. They are viewing a USGS Quad sheet of the Cape Henlopen Area as well as an Aerial Photo from the USGS. Some specific items that were discussed were scale, legends, and how the data on the two maps differed. They were able to find on the USGS Quad sheet where the Beacon Lighthouse fell back in 1926.

1.



The students next challenge was to create hand drawn data layers of the Roosevelt Inlet/ Lewes Area as well as the Cape Henlopen Area. They had base maps that dated as far back as 1918 to a more recent 2002. The goal was to see change over time. When they were done they reviewed each of the students maps in sequential order. What they discovered was that over time, occurrences, whether natural or created by man have impacted these areas. One example is the dredging of the Lewes and Rehoboth Canal. Another is how the Delaware Bay, because of frequent storms continually reshape these areas by beach erosion. These occurrences have created and widened Canary Creek as well as expanded the Cape to grow about 1 mile. Also many roads have been added as well as the amount of vegetation has increased.

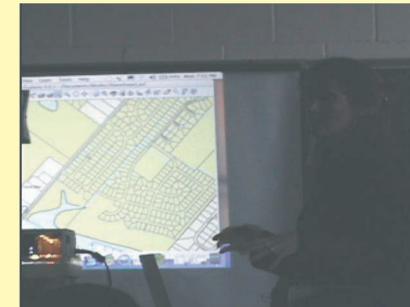


3.



Twelve students from Ms. Cunningham and Ms. Friends class took advantage of a day off to go exploring with the Global Positioning System (GPS). Several parents volunteered and Ms. Roe went as well. They obtained several historical landmarks in the Lewes / Cape Henlopen area as well as walked the beach at Cape Henlopen State Park to find where the Beacon Lighthouse fell. It was very windy and cold this day.

2.



Here the students were introduced to Geographic Information Systems (GIS) with ArcExplorer. Several data layers were gathered; roads, historical locations, shoreline data that dated back to 1842 to a more recent 1993, as well as geographic names and hydrology. The students were shown the DataMIL and the Delaware

framework layers which were used within ArcExplorer. They were shown how to measure and query data, identify and label data, use the map tip tool, and use the zoom/pan tools.

4.



The students are busy working with ArcExplorer studying how the layers reflect the changing coastline in the Cape Henlopen Area as well as the Roosevelt Inlet area. They used the measure tool to obtain how much both of these areas have changed over time. Next they will be using ArcView GIS and learn how to create their own data.

5.