

9 Glaciers

We will be working in class with a map of the Grinnell Glacier, originally from *Johnson, Arthur (1980). Grinnell and Sperry glaciers, Glacier National Park, Montana, a record of vanishing ice, USGS Professional Paper 1180*, and annotated at

http://serc.carleton.edu/quantskills/activities/glacial_retreat.html

- On the map that I will provide you, note the outline of the extent of the Grinnell Glacier in 1850. This is the first part of approximating the area of the glacier.
- Count the number of squares on partially covered by the glacier.
- Repeat this for 1937, 1968, and 1993.
- On the graph below plot the number of squares versus the year of the measurement.
- Based on the trend you observe, approximately when will the glacier melt completely (area= 0)? _____



