1. Patterns and colors are essential to maps. Compare a search for Harvard University on two interactive maps (e.g., Google Maps, Bing Maps, Yahoo! Maps, Apple Maps, map.harvard.edu). Answer the following questions, making references to concepts explained in Ware such as pattern recognition and properties of color. Please include screenshots of the examples you are comparing.
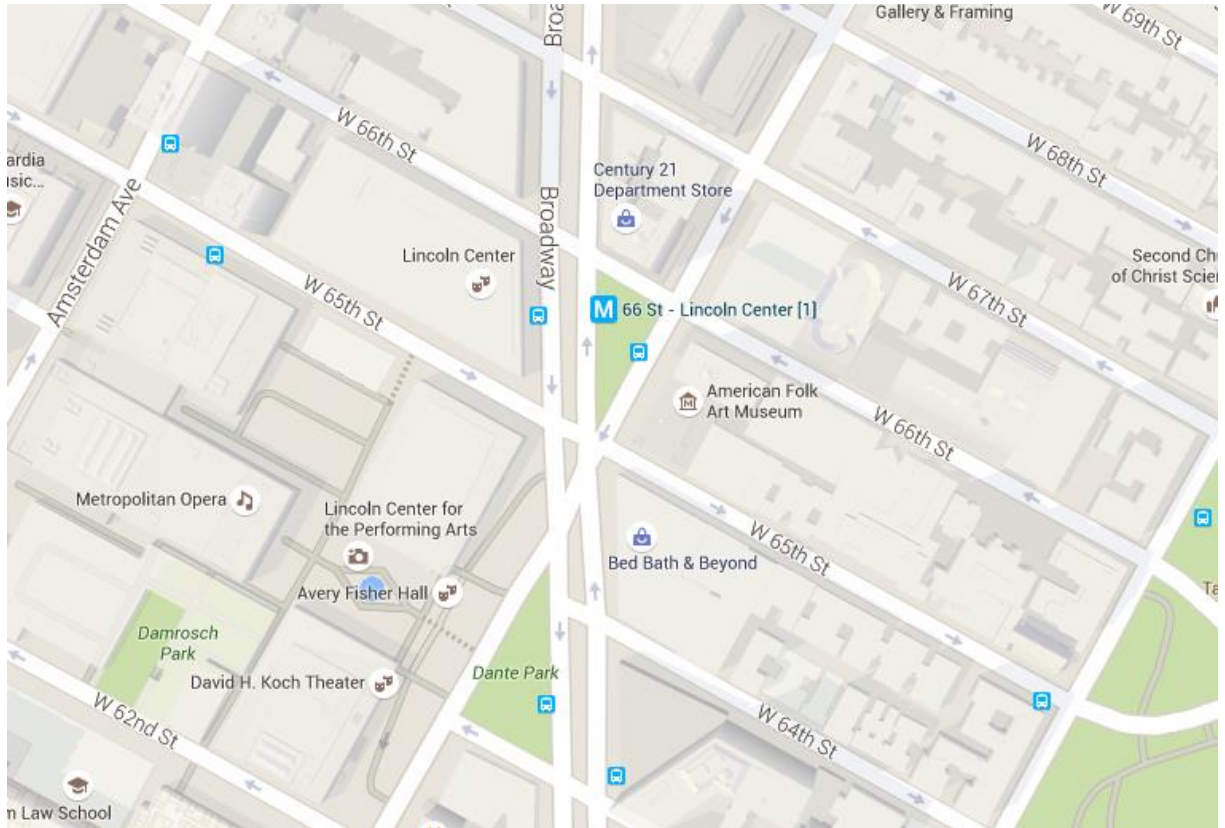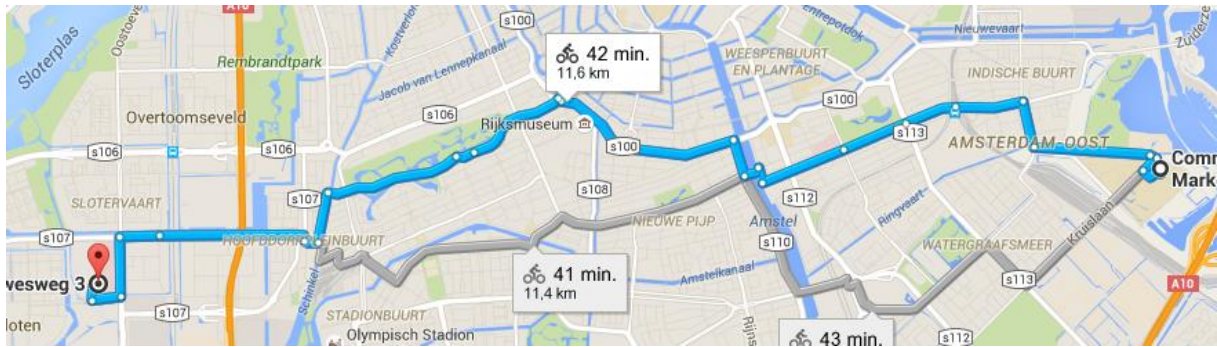

Figuur 1, Google Maps
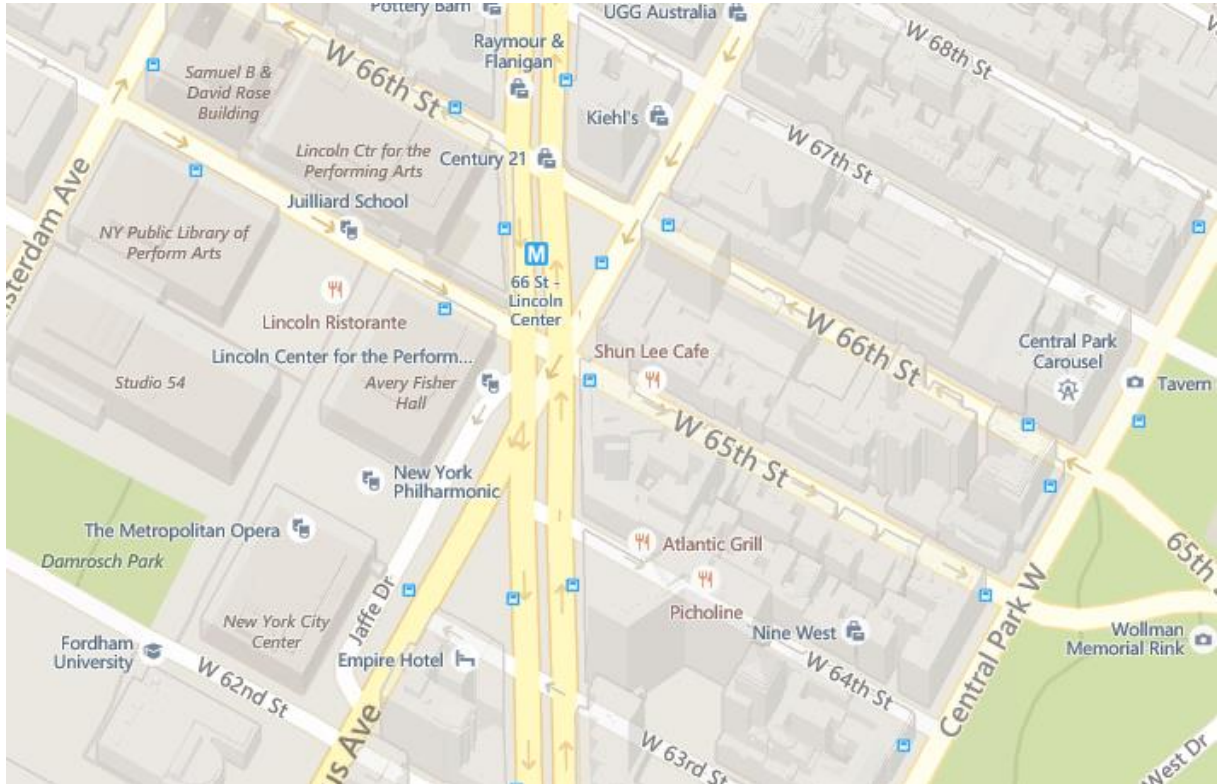
Figuur 2, Bing Maps

1. Which map promotes an easier visual search for buildings?
    1. I think Google has an easier visual search for buildings. This is however not due to factors as contrast mentioned in Ware. In that sense I think thta Bing's maps are better. But they use 3D representations of buildings. In that sense there is too much information per building. When there is a lot of buildings present, this is a bit confusing. The reason I think the rest of the visualization is better in bing is due tot he contrast between lines. Google sometimes doesn't use lines but shading. The contrast of the shading they use isn't always that great.
2. Which map more effectively visualizes routes from a random point A to point B?
    1. Bing Maps, again. The line they use is less isoluminent than Google's. Especially in Amsterdam where there is a lot of water, the blue they use fort heir lines is not that distinguisable from the water. Their levels of saturation are more alike as well.

Figuur 3, Google Maps
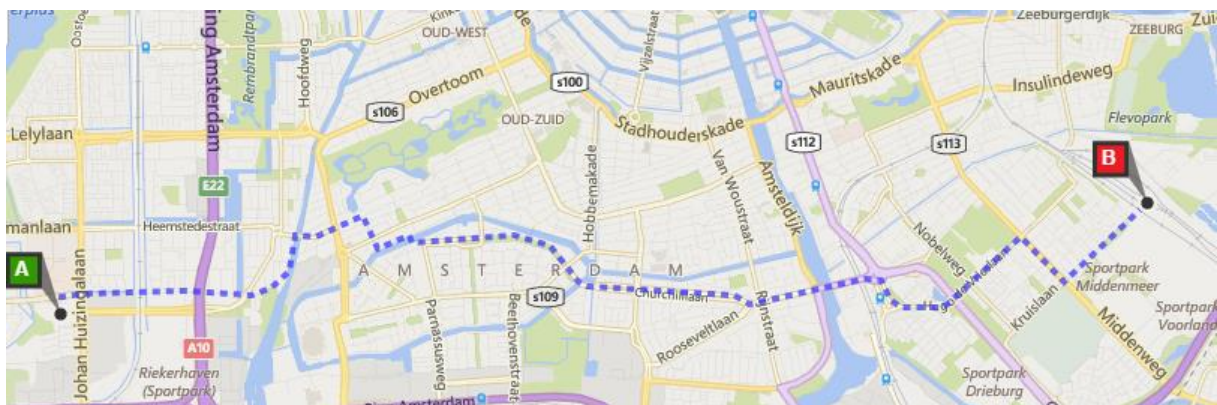
Figuur 4, Bing Maps

3. Which map is an overall better visualization, and why?
   1. Now it's Google's turn. Their maps is better because of the lower contrast. There is contrast where there needs to be. Otherwise the visualization is a bit overwhelming and the perciever of the visualization can't distinguish enough between the important thing on the map and the less important things. The yellow Bing uses for its main streets is also hard to focus on. This is an important thing and because the yellow doenst distinguish enough from the sandy colours around it, a larger pattern is more difficult to find.

2. Find a rainbow color map visualization on the web. Please include a screenshot and link of the visualization.

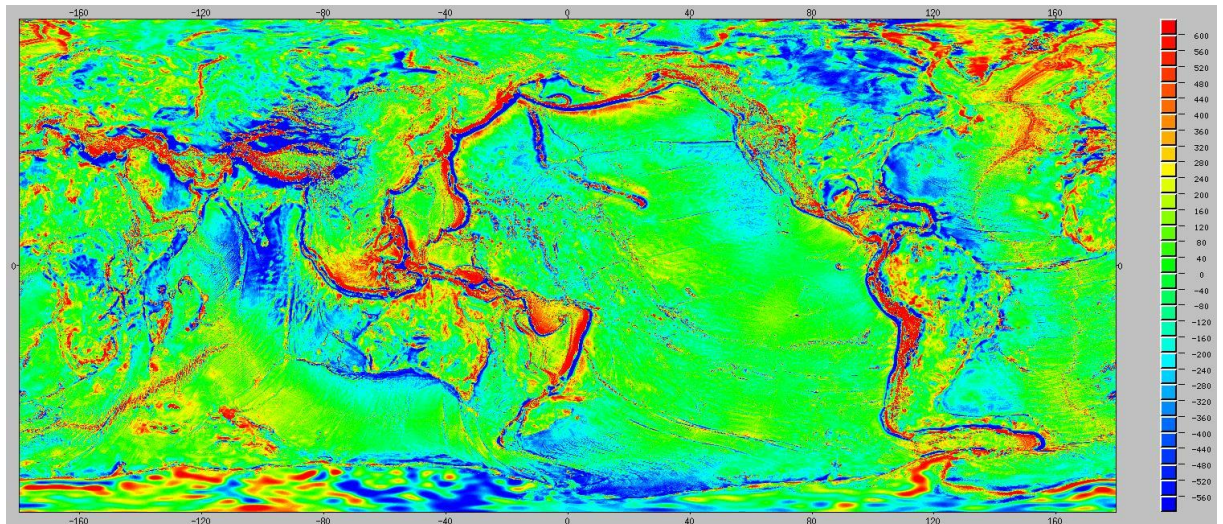   https://mycarta.wordpress.com/2012/10/14/the-rainbow-is-deadlong-live-the-rainbow-part-4-cie-lab-heated-body/

Figuur 5, Rainbow map example

1. Briefly summarize its intended objective and audience. Does it fail to successfully convey information? If so, why? Is there a good reason for this specific visualization to use a rainbow color scheme?
    1. The objective is, ironically, to show the difficulty of the rainbow map. That is what the site i saw used is for. However, the creator meant to show the differences in height on the world. It's audience was a linkedin group for geophysicists. It does certainly fail to convey information. The scale goes from low to high which is represented by different colours. However, colours don't work in this ordinal way. There is no bottom up difference between blue and yellow in what comes before the other. Only that yellow is usually a colour that is brighter. There is absolutely no reason to use this colour scheme.
2. Propose an alternative color scheme to replace the rainbow color map
    1. I have to be honest here, on the site that this map was on, there was, as well, a better alternative. That is to use the grayscale. In chapter three we read about the pros and cons of the greyscale. It is not good to use it as a way toe node a nominal difference. Colour can be used very well in that sense. However, the difference that it should represent in this case is that of scale, the value of the colour. Still the result can be a bit distorted, because a certain shade next to black looks brighter then next to white, but the result still works pretty well, as I will show below.
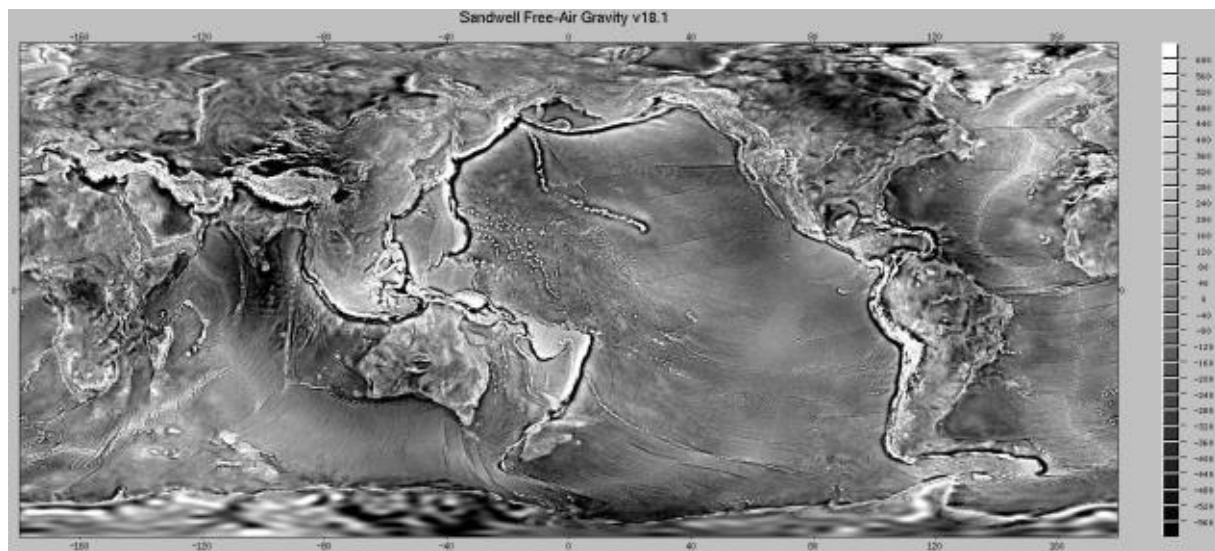
Figuur 6, Same map as the rainbow example but then greyscale