

Project 1: Projections/Grids

Points: 50 Points

Task 1: Create a map layout with 4 maps that show the entire globe using different projections. Each map frame should be labeled with the projection used. Each map should show latitude and longitude lines and country boundaries. You can include additional layers if you'd like. Deliver the map in PDF format. I have provided the following layers:

- ❖ [world_countries.shp](#): country boundaries ("COLORMAP" attribute can be used to apply different colors to the countries. Each country is assigned a value from 1 to 8 to allow for 8 unique colors to be assigned.)
- ❖ [world_extent.shp](#): rectangular global extent to define map extent.

Rubric:

- ❖ The 4 frames are neatly organized on the page. The layout uses space well and has visual hierarchy. The map is overall very neat and well organized. Space is used well, and the data are well presented. (5 Points)
- ❖ Latitude and longitude lines are appropriately displayed and labeled by adding graticules. Make sure that they are not too dense or intrusive in the map space. (5 Points)
- ❖ Country boundaries should be displayed using different colors (use "COLORMAP" attribute). (5 Points)
- ❖ Each map should be appropriately labeled with the projection name. (5 Points)
- ❖ Make sure to provide a title and your name. This layout does not require north arrows, scale bars, or a legend. (5 Points)

Task 2: Create a map layout containing 2 reference maps of West Virginia. One map should contain a latitude and longitude grid while the other map should contain a UTM grid. Both maps should be projected to UTM Zone 17N. Deliver the layout in PDF format. Data layers can be obtained from the West Virginia GIS Tech Center (<https://wvgis.wvu.edu/>) or streamed in using The WV GIS Tech Center Data Services (https://mapwv.gov/gis_services.html).

- ❖ The 2 frames are neatly organized on the page. The layout uses space well and has visual hierarchy. The map is overall very neat and well organized. Space is used well, and the data are well presented. (5 Points)
- ❖ Grids are appropriately displayed and labeled. Make sure that they are not too dense or intrusive in the map space. Add these as graticules or a coordinate grid. (5 Points)
- ❖ Include a variety of base map layers for reference. Make sure they are well symbolized. Include a legend explaining the symbology. (10 Points)
- ❖ Make sure to include a title, your name, and a north arrow and scale bar for each map. (5 Points)