Visualizing World Population

Description: In this activity you will access and visualize world population data using the user-friendly MyWorld GIS software. Available data includes total population, population density, projected population, male and female population, and age specific population, etc.
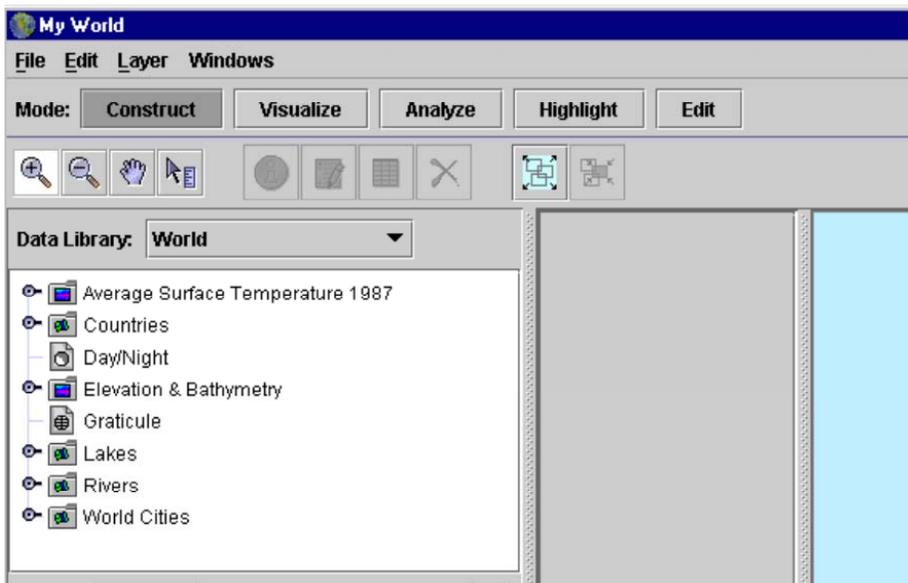
Learning objectives:

- Compare and contrast human population patterns of different countries world wide.
- Learn about Geographic Information Systems and what they are good for.
- Learn how to use a specific GIS, MyWorld GIS.

If you need to Download MyWorld GIS software go to http://www.worldwatcher.northwestern.edu/myworld/ for a description of MyWorld and the download instructions.

Open MyWorld by selecting it from the "Start" "Program" menu on your PC or by double clicking on the MyWorld Icon
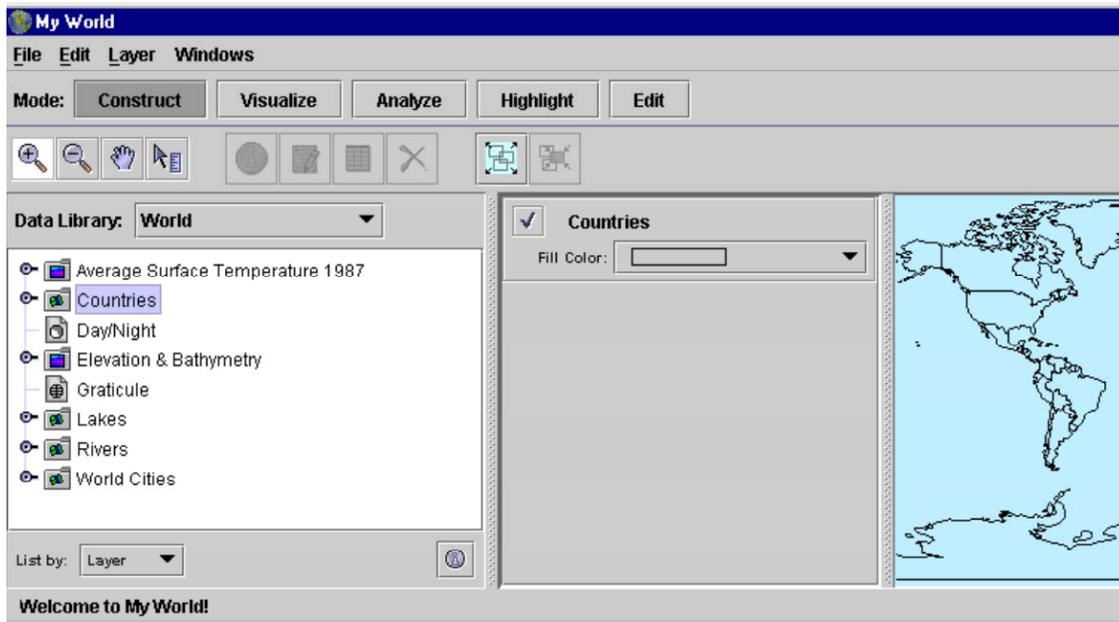

When MyWorld opens the default screen looks blank and you are in construct mode.
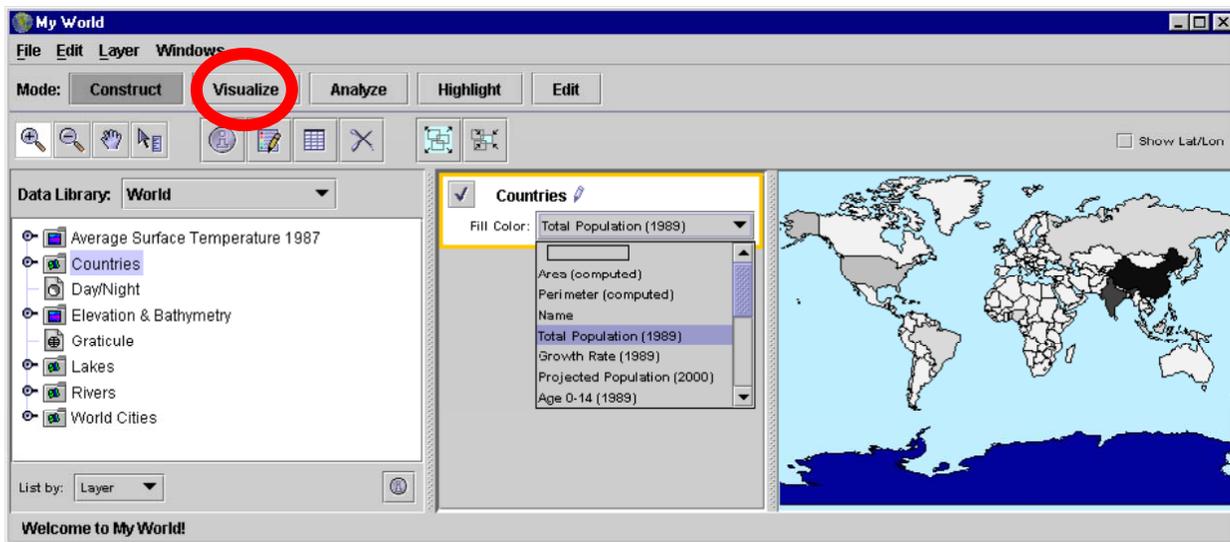
Drag the countries icon to the gray middle column and a map of the world will appear with country outlines.
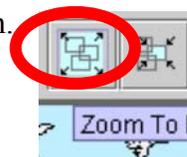

Click on the down arrow of the Countries box and a menu appears that allows you to select the different data sets to visualize. In the below image Total Population (1989) has been selected.
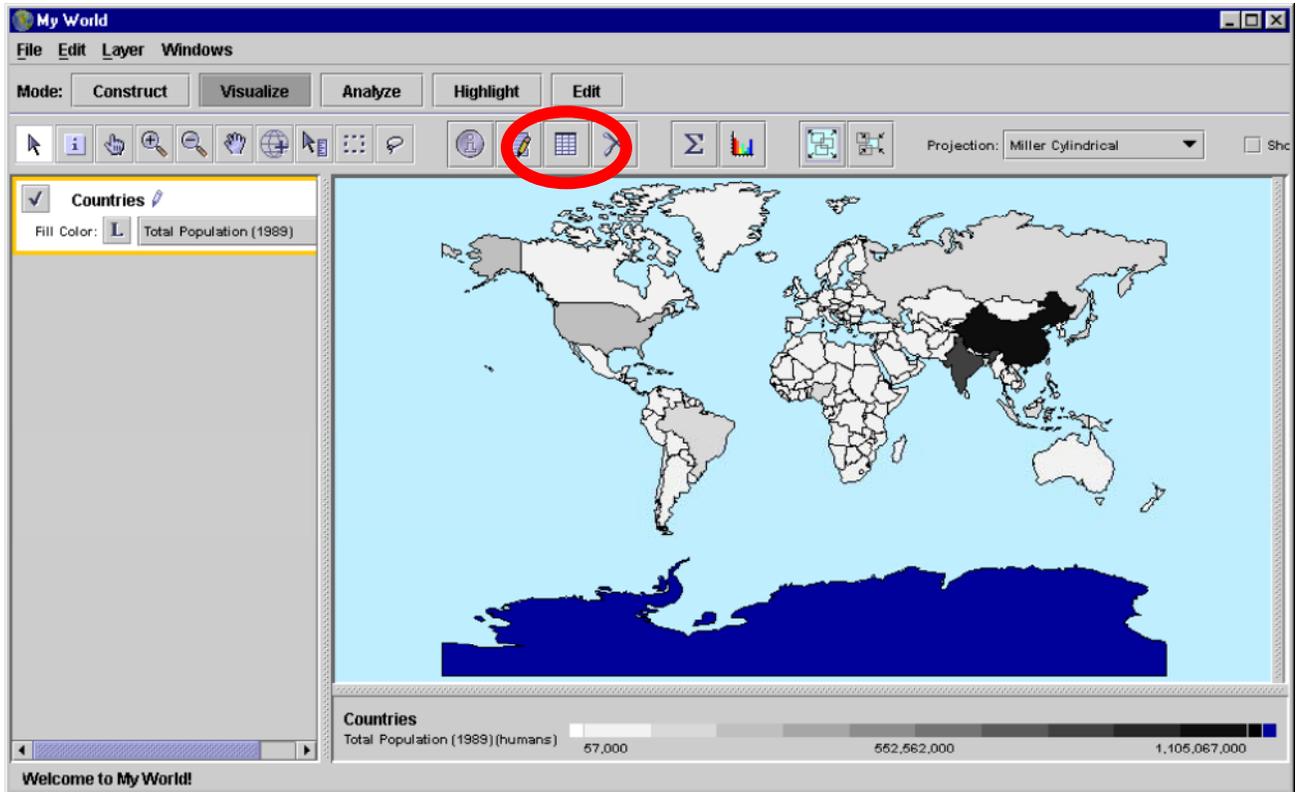

Change Mode to Visualize by clicking on the Visualize button (circled above) of the Mode select bar near the top of the screen.

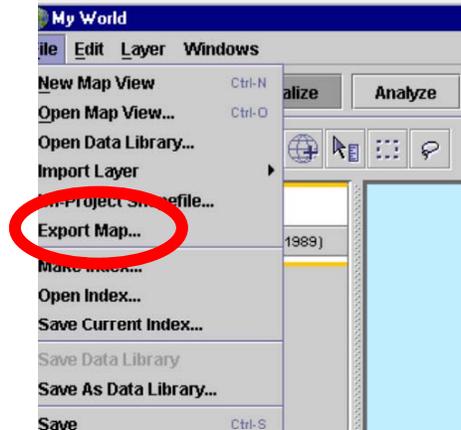Resize the screen and click on the Zoom to map Extent icon.

Your screen should now look like.

The Table button (circled above) allows you to see the actual data and to view it from largest to smallest or smallest to largest. For the table below the Total population column was selected (click on it) and the arrow in the title box at the top of this column was clicked on to display the information from largest to smallest.

Area (computed) (kilometers^2)	Perimeter (computed) (kilometers)	Name	Total Population (1989) (humans)	Growth Rate (1989) (%)	Projected Population (2000) (humans)	Age 0-14 (1989) (%)
37,462,856	22,900.062	China	1,105,067,000	1.52	1,304,536,725	27.08
12,633,115	14,357.16	India	832,535,000	2.06	1,041,870,411	37.02
37,689,228	35,332.453	US	248,243,000	0.77	270,097,680	21.63
6,804,778.5	26,269.053	Indonesia	178,211,000	1.91	219,441,783	36.78
66,458,372	51,684.445	Russia	149,527,479	0.4	156,239,863	-99
33,758,292	19,368.053	Brazil	147,294,000	2.01	183,339,177	35.5
1,436,767.25	7,872.968	Japan	123,045,000	0.35	127,866,010	19
3,641,756.25	4,315.003	Nigeria	113,665,000	3.22	161,075,377	47.96
544,795.812	2,589.014	Bangladesh	111,590,000	2.48	146,101,798	44.42
3,492,841.75	6,593.789	Pakistan	109,950,000	3.41	158,994,885	45.15
7,709,955.5	12,371.861	Mexico	85,440,000	2.11	107,500,943	37.82
1,402,761.375	3,688.114	Germany	80,387,283	0.5	84,920,790	-99
1,335,641.625	5,183.49	Vietnam	65,758,000	2.4	85,358,764	39.71
930,782.125	7,375.622	Philippines	61,224,000	2.27	78,370,481	40.09
1,187,177.375	5,771.193	Italy	57,537,010	0.17	58,622,144	16.96
878,488.375	4,802.508	UK	57,270,000	0.3	59,188,515	18.98
2,208,103.5	5,114.075	France	56,119,010	0.44	58,895,721	20.29
2,028,547	5,836.869	Thailand	55,200,000	1.33	63,834,806	33.56
3,168,805	6,261.998	Turkey	54,899,010	2.07	68,777,086	35.13

Close

Activity by R.M. MacKay, Clark College, Physics and Meteorology

Maps can be exported to JPG image files and then imported into a word processor or image viewing routines and printed with your report.

Assignment.
Use MyWorld to study world population and how population characteristics vary between countries. Summarize your findings in a report with at least 6 images. Each image should include a paragraph or two describing what the image is and what it helps explain.

Your report should include answers to the following questions.

What are the developing countries and the developed countries? Use a visualization of GNP as an indicator. Click on the down arrow of the Countries box and a menu appears that allows you to select GNP per capita to visualize. Double click on the word "Countries" of the Countries box and select Rainbow for the color scheme and number of fill colors as 20 then click Apply. Summarize this image in your own words.

What are the 10 most populated countries in the world?

Which 10 countries have the greatest population density?

Which countries have the greatest population growth? Do developing countries typically have larger or smaller growth than the developed countries?

Also identify 4 other questions that can be investigated by the data provided by MyWorld which are of interest to you. Clearly identify each question and present your findings including data visualization images that help you answer each question.