

Lesson 5

My Country

The next several lessons of this module continue to examine the population graphs of the United States, Kenya, and Japan prior to 2015. Distributions for 2020 and in the future will also be examined. Several lessons involve estimating the future shape of these countries based on assumptions that affect the counts in key age groups. Each country has a distinctive population pyramid graph and histogram that suggests challenges and opportunities. Changes in the population distribution over time indicate possible new challenges and opportunities.

Now it is your turn. In this lesson, you will generate a population distribution of a made-up country. What shape do you want your country's population to represent (bottom-layered, lower middle-layered, upper middle-layered, top-layered) and what age groups might pose some challenges or special concerns for your country now or in the future? Your country will be referenced in several of the upcoming lessons. These lessons will allow you to address some of the possible changes in your country's future in the same way that they impact the future of the United States, Kenya, or Japan. The lessons in Unit 4 will encourage you to work with your country using a projection model that is initially organized for analyzing the United States, Kenya, Japan and other countries. (If interested, provide a name for your country. The lessons in the next unit of this module will reference the country you design as My Country.)

Lesson 5 – Problems

Consider the following scenarios before you decided to generate a population distribution:

Scenario 1: The Perfect Shape?

The United States, Kenya, and Japan each face unique challenges and opportunities that are connected to their current population distributions. Finding the resources to care for a growing segment of older people, or finding the resources to care for a significant count of children were part of what the United States or Kenya or Japan face or will face in the future. A student completing this module wondered if there was a “perfect shape” of a population distribution. Several opinions were shared regarding that question, but the most interesting opinion of a “perfect shape” was a suggestion that the population distribution resulted in a pyramid graph that looked like a house. Consider creating a population distribution that results in a pyramid graph fitting this description. Why do you think this shape was suggested as a “perfect shape”?

Scenario 2: A Top Layered Country

There are currently no population distributions that would define a country as a top-layered country. Consider creating a country that is top-layered. What challenges do you think will be faced by a country with this shape?

Scenario 3: A Lower and Upper Middle-Layered Country

It is possible that a country has an equal percent of people in more than one of the layers of the population distribution. Consider creating a country that has an equal or nearly equal percent of people in the lower middle-layer and the upper middle-layer in which the percent in these layers is greater than the percent in the bottom or top layers.

Consider one of the above scenarios to complete the following problems in this lesson.

1. Generate counts for your country for the beginning of 2015. Complete the following table (estimate counts in millions of people to the nearest hundredth – for example, 16,293,232 will be represented as 16.29 million):

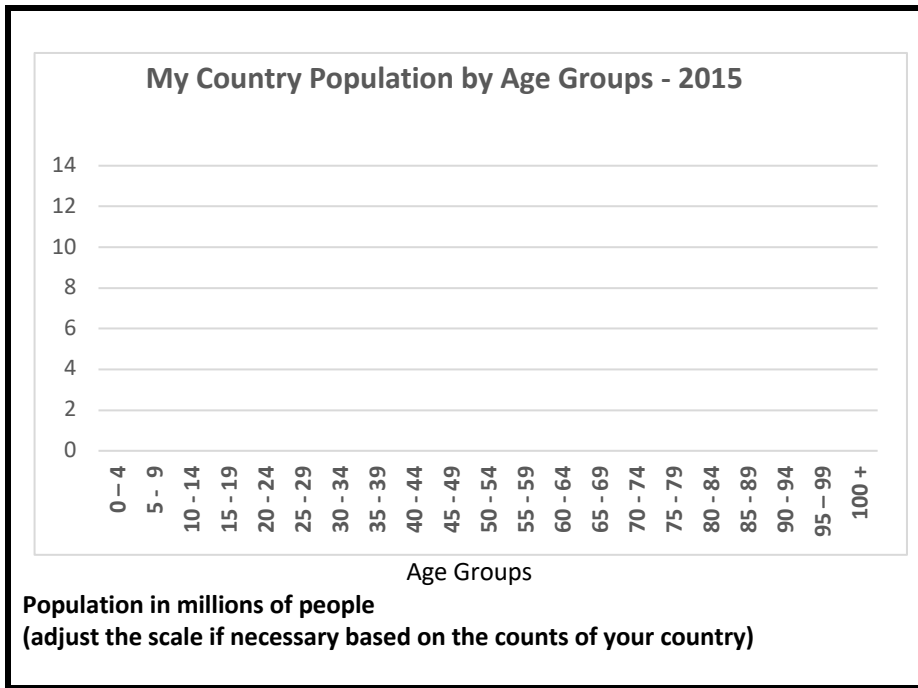
Country: **My Country** in 2015

Age Group	Males	Females	Total
0 - 4			
5 - 9			
10 - 14			
15 - 19			
20 - 24			
25 - 29			
30 - 34			
35 - 39			
40 - 44			
45 - 49			
50 - 54			
55 - 59			
60 - 64			
65 - 69			
70 - 74			
75 - 79			
80 - 84			
85 - 89			
90 - 94			
95 - 99			
100+			

2. Based on the table of counts in each age group, use the following template to complete a pyramid graph of **My Country**:

Male	My Country - 2015					Female				
					100+					
					95 - 99					
					90 - 94					
					85 - 89					
					80 - 84					
					75 - 79					
					70 - 74					
					65 - 69					
					60 - 64					
					55 - 59					
					50 - 54					
					45 - 49					
					40 - 44					
					35 - 39					
					30 - 34					
					25 - 29					
					20 - 24					
					15 - 19					
					10 - 14					
					5 - 9					
					0 - 4					
					Age group					
				0		0				

3. Create a histogram of My Country.



4. Determine if your country is bottom-layered, lower middle-layered, upper middle-layered, or top-layered or a combination of these descriptions.
5. Identify any features of your country you want to watch as you look into the future.
6. Use the templates provided to calculate estimates of the median age, the spread as defined in Lesson 4, and the mean age for My Country.
 Median age:
 Spread of ages from approximately 25% to 75% of the population:
 Mean age:
7. Describe a typical person in your country.

My Country – 2015

Template for finding the estimate of the mean age:

Age group	Mid-interval Age	Count of people (in millions of people)	Sum of ages in age group: (Estimated in millions of years)
0 – 4	2		
5 - 9	7		
10 - 14	12		
15 - 19	17		
20 - 24	22		
25 - 29	27		
30 - 34	32		
35 - 39	37		
40 - 44	42		
45 - 49	47		
50 - 54	52		
55 - 59	57		
60 - 64	62		
65 - 69	67		
70 - 74	72		
75 - 79	77		
80 - 84	82		
85 - 89	87		
90 – 94	92		
95 – 99	97		
100+	102		
	Total		

My Country 2015

Template for finding the estimate of the median age:

Age group	Count of people (in millions of people)	Cumulative count of people (in millions)	Proportion of cumulative count of people to total population	Proportion as a percent
0 – 4				
5 - 9				
10 - 14				
15 - 19				
20 - 24				
25 - 29				
30 - 34				
35 - 39				
40 - 44				
45 - 49				
50 - 54				
55 - 59				
60 - 64				
65 - 69				
70 - 74				
75 - 79				
80 - 84				
85 - 89				
90 - 94				
95 – 99				
100+				
Total				