



# The Population Pyramid

## Lesson 2

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# LESSON 2: THE POPULATION PYRAMID

## Overview



60 Minutes

### Overarching Goals

The students will be introduced to the factors that influence a population's age structure. They will learn how one can create and interpret a population pyramid. This basic graph not only shows the age structure of the population in a given year, but also shows what will happen to this population in the following years.

### Overarching Skills

- Encourage critical thinking
- Observe, analyse, interpret
- Develop one's own point of view
- Identify data sources and how they can be used

### Materials

- Answer Sheet for Teachers "Activity 1 – Small Group Work and Different Types of Population Pyramids"
- Answer Sheet for Teachers "Activity 2 – Interpreting a Population Pyramid"
- Answer Sheet for Teachers "Activity 4 – How Would You Like to Live in Old Age?"
- iPads with the App *A Life Journey*
- Overview for Teachers
- Worksheet "Activity 1 – Small Group 1, 2, 3"
- Worksheet "Activity 1 – Different Types of Population Pyramids"
- Worksheet "Activity 2 – Interpreting a Population Pyramid"
- Worksheet "Activity 3 – Calculating with Population Data"
- Worksheet "Activity 4 – How Would You Like to Live in Old Age?"



### ACTIVITY 1: POPULATION STRUCTURE AND POPULATION PYRAMIDS (🕒 20 MINUTES)

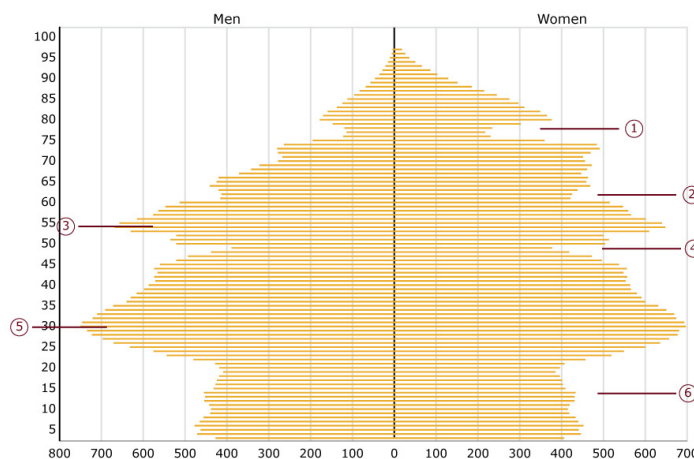
The students can work individually, with a partner or in small groups to read the texts and answer the questions. With this information, they can complete the worksheet “Different Types of Population Pyramids”.



### ACTIVITY 2: INTERPRETING A POPULATION PYRAMID (🕒 10 + 5 MINUTES)

The students should examine, analyse and interpret this population pyramid that represents Germany’s population in 1991. Then, they should discuss the accompanying questions in small groups (5 minutes) and present their answers and interpretations to the class.

Information to interpret the population pyramid of Germany’s population in 1991 (in thousands):



Source: Destatis

It is a “slow growth” pyramid.

Mortality is more likely to affect men of older age, which is why the number of women in these age groups is also higher.

- ① Due to the First World War, there is a shortage of births.
- ② As a result, the number of birth cohorts at reproductive age will also decrease later on.
- ③ Birth rate increase due to a targeted political effort to promote births.
- ④ Due to the Second World War, the number of births declines.
- ⑤ The so-called Baby Boomers are the generation with a high level of births.
- ⑥ Decline in the number of births.


**ACTIVITY 3: CALCULATING WITH POPULATION DATA (🕒 10 MINUTES)**

The students can work in partners or as a class to try and complete the following calculations. You can provide the worksheet “Activity 1 – Small Group 1” with the necessary equations to calculate the dependency ratio, the young-age dependency ratio and the old-age dependency ratio.

	0-14	15-64	65+	Total
1950	243,175	674,347	105,384	1,022,906
1960	276,150	803,101	126,950	1,206,201
1970	298,293	894,204	157,840	1,350,337
1980	317,838	969,450	184,592	1,471,880
1990	350,134	1,038,860	181,605	1,570,599
2000	250,340	942,700	208,210	1,401,250
2010	201,630	899,210	232,450	1,333,290
2017	213,609	847,552	254,474	1,315,635

Source: Statistics Estonia

**Solution:**

	Dependency Ratio	Young-age Dependency Ratio	Old-age Dependency Ratio
1950	51.7%	36.1%	15.6%
1960	50.2%	34.4%	15.8%
1970	51.0%	33.4%	17.7%
1980	51.8%	32.8%	19.0%
1990	51.2%	33.7%	17.5%
2000	48.6%	26.6%	22.1%
2010	48.3%	22.4%	25.9%
2017	55.2%	25.2%	30.0%

**ACTIVITY 4: WORKING WITH THE APP *A LIFE JOURNEY* (🕒 10-15 MINUTES)**

The students should look at chapters 2, 6, 7 and 8 of the app *A Life Journey*, which provide expert knowledge on ageing itself and the ageing society. Subsequently, they should discuss the questions on the topic in pairs, and experience has shown that they are more motivated to participate if the questions are freely selected. Alternatively, all questions can be answered by all students. At the end, interesting results (e.g. How long would you like to work? With whom would you like to live with in old age?) can be collected and evaluated, and presented as a diagram for the class.

- Chapter 2: “How important are my early years of life?”
- Chapter 6: “How do ageing societies work?”
- Chapter 7: “Is there a formula for healthy ageing?”
- Chapter 8: “How can I remain independent in old age?”