

Lesson Plan

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Title of Activity: Age (What will the population of the Czech Republic be /your country/?)	Subject area: Math and citizenship education
Grade Level(s): 14 – 15	Duration: 45 min

Learning objectives:

At the end of the lesson:

- the students recognize and name different types of graphs (e.g. column, line, pie)
- are familiar with graphs – understand their axes, description and map legends, and
- find and interpret the required information from the graph (subtracts values, compares data).

Teaching Method: cooperative learning combined with inquiry-based learning

Teaching Techniques: group and individual work, discussion, practical exercises

Materials / Resources / Technology use:

- graph created during the Mini-census project <https://csu.gov.cz/miniscitani/vysledky-miniscitani-2025?tab=results&q=1&r=CZ072>
- Paper, pencil
- infographic from the Czech Statistical Office (https://csu.gov.cz/docs/107516/e0bd1758-021d-b9ef-9619-2f8a7ee8478a/jake_bude_obyvateľstvo_ceska.jpg)
- worksheet with tasks.

Activity Description:

Students work both individually and in groups within the activities. They work with different types of graphs and look for answers to the assigned tasks in them. As part of group work, they discuss their proposed solution and compare it with others.

1. Task (motivation): “A person changes during life – and so does language. Sometimes young and old people do not understand each other because they use different words. Let’s see how language develops.”

Age – Population

Students work independently, thinking about the meaning of 5 modern words and 5 outdated expressions. Finally, they present their explanations orally in class.

2. Task: The teacher projects a bar graph on the board (Your Age from the Mini-Census project for the Zlín Region). The students are tasked with reading as much information as possible from the graph and describing the individual columns numerically. After a few minutes, everyone has the opportunity to express what information they found in the graph.

3. For the next part of the lesson, the students will be given the task of dividing into mixed groups of three, including both boys and girls.

Each group will receive an infographic from the Czech Statistical Office (various graphs and information regarding the age of the population in the Czech Republic) and a worksheet with tasks related to the infographic. In groups, they will discuss how to solve the tasks. They will solve everything using the mathematical procedures they have learned - arithmetic mean, percentages, ...

Finally, each group will present its answer through its "spokesperson" and the individual groups will discuss among themselves the correctness of the solution. During the discussion, they will use their knowledge from other subjects (geography, civic education, natural history, Czech language, ...)

Closure/Assessment: The activity ends with a reflection where students think about what they have learned, what they already knew from previous lessons, and what they learned in the lesson.

References:

Infographic "What will the population of the Czech Republic be like", Czech Statistical Office, infographic from 2024. https://csu.gov.cz/docs/107516/e0bd1758-021d-b9ef-9619-2f8a7ee8478a/jake_bude_obyvateľstvo_ceska.jpg

Czech Statistical Office, Results of the 2025 Mini-Census for the Zlín Region, Chart 1. – Your age <https://csu.gov.cz/miniscitani/vysledky-miniscitani-2025?tab=results&q=1&r=CZ072>