3.5 How does population change? (pp56–57)

Population

3.5: Lesson plan

Starter

If the ideal starter presents a wow! factor at the start of a lesson, this is the ideal starter.

Use the graph, Figure A, on p56 of the student book. Ask the students what the population was in 1100 AD (around 300,000,000). Now ask:

- When did it reach half a billion? (1650)
- So how long had it taken to double? (About 650 years)
- When did it reach 1 billion? (1820)
- So how long had it taken to double? (About 170 years)
- When did it reach 2 billion? (1930)
- So how long had it taken to double? (About 110 years)
- When did it reach 3 billion? (1960)
- How long had this extra billion taken? (About 30 years – note change in question)
- When did it reach 4 billion? (1974)
- How long had this extra billion taken? (About 14 years)
- When did it reach 5 billion? (1987)
- How long had this extra billion taken? (About 13 years)
- When did it reach 6 billion? (2000)
- How long had this extra billion taken? (About 13 years)
- When did it reach 7 billion? (2012)
- How long had this extra billion taken? (About 12 years)
- What next? Can this growth continue? What will happen if it does?

Development

Work through pp56 and 57 of the student book.

Activity 5b can be extended. Information about this is at the end of the lesson plan since it is best done after the plenary or as part of another lesson.

Plenary and homework

Pose the question, ‘What is likely to happen to the world’s population in future?’

Present the students with copies of Unit 3: Enquiry worksheet 7 and ask them to complete the first part of the graph, plotting the actual population using data up to and including 2010. Note: this section of the graph shows the same information as part of Figure A on p56 of the student book, so to save time and repetition the first part could be completed in advance, before printing off the worksheet. However, it might be helpful for some students to practise their graph-drawing skills.
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Then explain that the three alternative estimates have all been suggested by experts as serious future possibilities for population growth. Ask the students to complete the graph and while they are doing this, ask them to consider:

- What might cause each scenario to come true?
- What the consequences of each scenario might be?

**Unit 3: Enquiry worksheet 8** starts to suggest a possible answer to the two questions posed here and is also a way of extending activity 5b on p57 of the student book. Ask the students to complete the worksheet for homework.

The ‘Population change enquiry’ takes ideas from this section of the course quite a lot further. It can be used for the development of a variety of graphic and quantitative skills too.