Topic: Crowded Planet (do not tell the topic before word rose)

Tags: Biology: Population; resources, environment; population growth

Level: B1/B2

Source: www.populationconnection.org

Skills practised: speaking, writing, deducing, predicting, listening, reading.

Scaffolding needed: no grammar; vocab

Time: 2 lessons

Aims:

- to learn about population growth and its effect on the environment

- to learn new terminology

- to interpret diagrams

- to understand the causes and effects of Earth's human population reaching 8 billion

- to understand information expressed in figures in texts and graphs

- to transfer visual information into verbal information

- to articulate your thoughts on statements that deal with ethical issues about population and the environment
- to acquire the language to successfully talk about statistics

Methods/classroom activities: warming-up activities (vocab scaffolding, functions scaffolding, activating prior knowledge), teacher's talk, pair work, information transfer, critical thinking (predicting, cause-effect), individual tasks including online research, evaluation

Assessment: teacher evaluation of student discussions; student self-evaluation

Step 1
    Language Input: Vocab scaffolding: wordrose + guessing topic + highlight subject-specific vocab
Vocab for word rose: PP

Step 2
Activating prior knowledge: In pairs students discuss (lower thinking skills= short answers):
How many people live on earth? In your state? In Europe? in the US?
What factors affect the size of a population? (number of births, how long people live, etc.)
What happens when Earth's population grows? (more crowded, more resources needed)

Step 3

TEXT. Read silently + highlight

Step 4

    Language Input: CALP: Useful expressions for expressing opinions and talking about stats/graphs
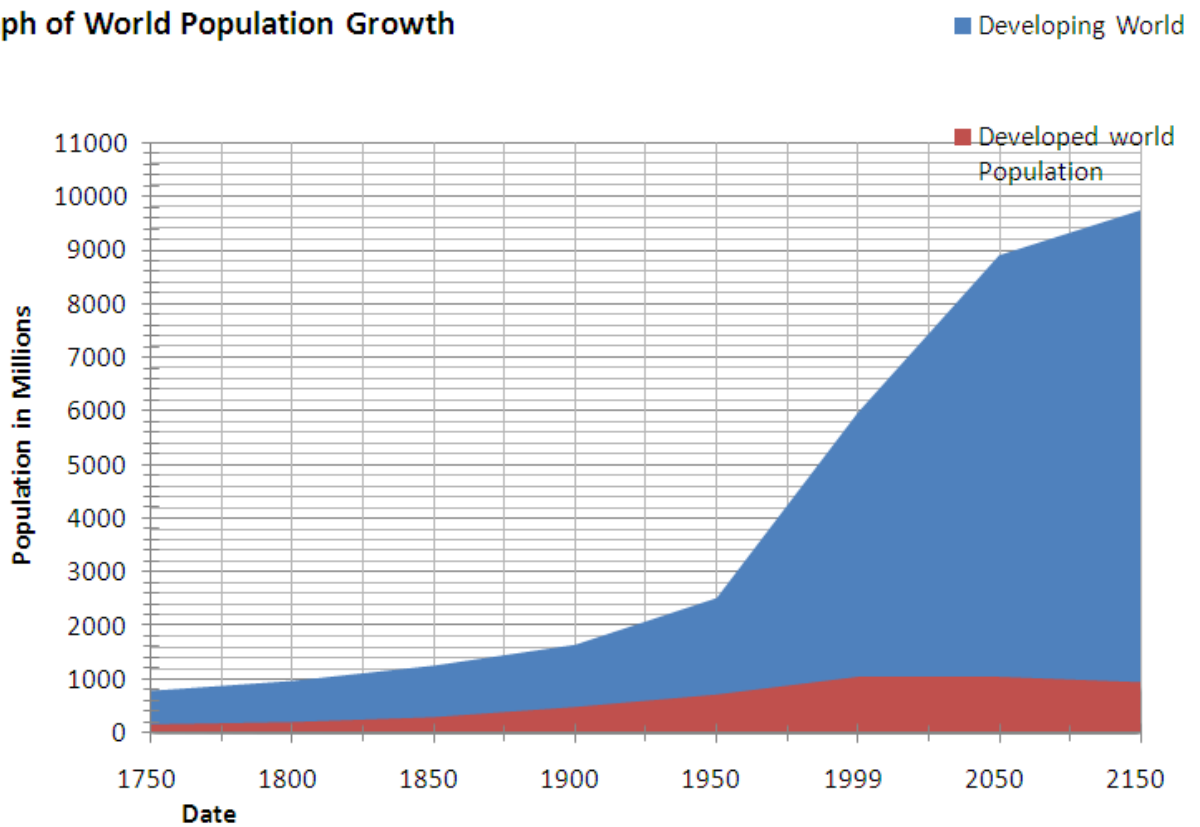
Step 5

Visual Input: Look at "Population Boom" graphs (phc) together. In pairs students determine what world population was when they were born/ their parents/ their grandparents. How much will the population grow in your lifetimes? Discuss in 3s: Why has the population boomed in the last 50 yrs? Do you think there is a limit to how large the population can grow?

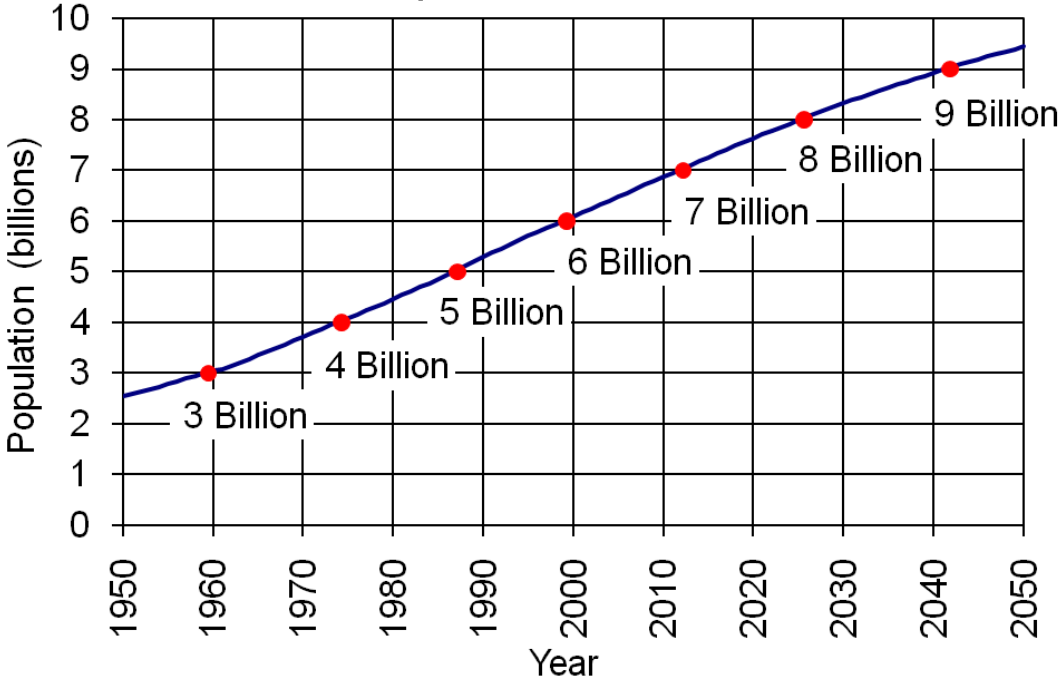Ask why the author chose to present information in this way.

Step 6

In pairs students analyse the information in the other graphs. Transfer: visual to verbal.

A Graph of World Population Growth

World Population: 1950-2050

Population (billions)

10	
9	
8	9 Billion
7	8 Billion
6	7 Billion
5	6 Billion
4	5 Billion
3	4 Billion
2	3 Billion
1	
0	

Year

1950 1960 1970 1980 1990 2000 2010 2020 2030 2040 2050

Source: U.S. Census Bureau, International Data Base, June 2011 Update.

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Step 7

1 Think-Pair-Share

First in 3s *What are some ways to address the issues facing humanity as our population increases?* … then discuss together.

2 *Do you think limiting the number of children each couple can have is a solution (see China)?* Discuss in pairs why or why not.

Step 8

Check out the world population clock at: http://population.io/

Set HW1:

1 Check out for **China, Italy** and another **country of your choice**:

median age

fertility rate

urban population

at

www.worldometers.info/world-population

2 Check out your place in the world and your life expectation.

at

http://population.io/

Next lesson: compare findings and report on your country.

Step 9

Functions Scaffolding: Expressing opinions (on wall)

Debate on ethical issues related to population and the environment

Procedure:
1. Tape the signs on the wall around the classroom: AGREE; DISAGREE
2. Explain to the students that you will be reading several statements to them, and that they should stand in front of the sign that most closely represents their reaction to the statement you've read. They should collect good arguments in 3s. Then they will work with a partner from the other group to discuss their particular opinion on this issue.

They move every time teacher reads out new statement.

Have instructions **repeated back** to Teacher.

Choice of statements:
1. Because our population will soon be at eight billion people and continues to grow, we need to expand land area available for living and growing food by cutting down the rain forest.
2. With billions of people commuting from one place to another, drilling for more oil is necessary to fuel more cars.

3. In order to feed our population, we must use pesticides, chemical fertilizers, and genetically modified crops to increase farm yields.
4. In a real crunch, jobs are more important than environmental quality.
5. With 7.8 billion people on the planet, water pollution is inevitable and we should not waste money trying to prevent it.
6. *Arable land should never be used for housing, businesses, or other non-agricultural uses because we need all available farmable land to produce food.*

Alternative 1:
Instead of having students move around the room and discuss their thoughts on the issues, you can use this activity as a lesson in persuasive writing. Choose one of the statements and ask the students to write a short (3-5 paragraph) essay on their stance. They should choose an audience and try to persuade that audience to believe as they do about the issue.

Alternative 2:
Class debate

Step 10
Evaluate (introductory) AIMS in 2s

- 3 things everybody should know about population growth and its effect on the environment

- 2 new expressions that you have learnt (to learn new terminology)

- 1 expression you remember how to talk about graphs (to transfer visual information into verbal information

Step 11
Set HW 2: Hand out any 2 texts on the topic/give 2 links and color-coded note sheets. Learners read and prepare 10 bullet points. Next lesson: concentric circles.

TIP

More teacher resources at : www.worldof7billion.org/teacher_resources

https://www.blikk.it/bildung/unterricht/clil/clil-activities

https://www.blikk.it/bildung/application/files/2515/5291/3155/Functional-Language.pdf

EXPRESSING OPINION

Pros
- The main benfit of ….is
- …is generally a good thing because…
- One positive aspect of …is…

Cons
- On the other hand,…
- As for the disadvantages,…
- … is not a good idea.

Giving opinions
- I believe/don't believe that…
- In my view/opinion…

Disagreeing
- Yes, but…

Giving examples
- For example,..
- …, say,…