



Population Growth

Social Studies

Goals: Students will determine how population growth could affect global climate change.

Objectives: Students will ...

- Identify how much our population has grown and projections on how much our population will grow
- Understand how major historical events impact population
- Compare current emission rates per capita and calculate emission rates in 2050

Materials (For a class of 30):

- Population Connection's "World Population" video (www.populationconnection.org)
- Student Personal Emissions Calculator with student's personal emissions from Personal Emission Calculator-Extension lesson
- Population Growth – Student Sheet

Time Required: 45-60 minutes

Standards Met: G1, G4, G5

Procedure:

- Ask students to get out their personal emissions wheel from the activity in Math. Explain that they will need this information for calculations at the end of this activity.
- Pass out Population Growth – Student Sheet.
- Show the ZPG video.
- Pause the video to review where continents and countries are on the map.
- Pause the video to show population reduction and increase during major historical events.
- Using their student sheets, each student should calculate the emission increase in 2050 if every person has the same emission output as their personal emissions.
- With the class, debrief what the projections are and how this could impact the climate.

Assessment:

- Completion of Population Growth – Student Sheet



Population Growth – Student Sheet

Name: _____ Date: _____

1. What is the projected population for 2050? _____
2. Calculate your average personal emission rate. You can do this using the Personal Emissions Calculator-Extension lesson. Add the numbers for Home Heating, Electricity Use, Transportation and Waste Disposal and divide by 4. Show your work below.

Personal emission rate: _____ lbs/year

3. If every person in 2050 has your same emission rate, what will the total emissions be?

Show your work below.

4. How might this affect our climate?