EVERYTHING IS CONNECTED

POPULATION EDUCATION

LESSON PLAN

INTRODUCTION

"Everything is connected to everything else" is often called the First Law of Ecology. This activity encourages students to consider the connections between the natural environment and our local, regional and global society. With the population reaching 8 billion in 2022 and projected to top 10 billion in the second half of the century, one cannot ignore the far-reaching impact of our numbers on virtually every aspect of life on Earth.

MATERIALS

Butcher paper/flip chart paper
Markers

PROCEDURE

1. Divide students into groups of 3-4 and distribute butcher paper and markers to each group.
2. Students write "8 Billion People and Growing" in the middle of the paper. Ask students to think about possible impacts of more than 8 billion people living on the planet. You may want to provide an example, such as "more people" causing "more cars on the road" or "more houses." Next to "8 Billion People and Growing," draw an arrow and add one of these concepts. Be sure to tell students that there are no right or wrong answers, but you may ask them to explain their proposed connections. Also, let them know that the cause and effect relationship can be positive, negative, or neutral.
3. Working within their groups, students should build out their word web. They may add on to the central concept of "8 Billion People and Growing," or add on to what someone else contributed. For each concept that a student adds, they should draw arrows to any of the other concepts that form a cause and effect relationship. The object is for each group to create a large and interconnected web.
4. If this is as far as you're planning to go with the activity:
   - Have each group hang their concept map on the wall. Allow time for a gallery walk so students can read other groups' maps. Go over the Discussion Questions.

OVERVIEW

Concept

In nature, everything is connected to everything else. Human population growth is a factor that has far-reaching effects on the environment and society.

Objectives

Students will be able to:

- Identify possible environmental, social, political, and economic effects of a growing world population.
- Create a concept map to illustrate cause and effect relationships.
- Research news outlets to find real world examples of population impacts.

Subjects

Economics, Health, Science, Social Studies

Skills

Drawing connections, explaining cause and effect relationships, working in cooperative groups, concept mapping

Method

Students create a concept map in cooperative learning groups to display cause and effect relationships between population, the natural world, and human society.

If you'd like your students to do further research:

- Challenge each student to find two news articles that make the connection between population and other items on the web. This may be done in class or as a homework assignment. Request that one article be on a global scale and one on a local scale. For each article, have the student write a short summary of the article, 4-5 sentences, on an index card.

  During your next meeting period, students return to their small groups. On their concept maps, each student tapes their index card summary onto the map where their articles fit into the web. This may mean that students need to expand their web to include more items – that's okay!

DISCUSSION QUESTIONS

1. Do you agree with all the cause and effect relationships found on the concept maps?

Answers will vary.

2. Were there any connections that you saw on all of the concept maps? Did you make any connections on your map that you didn't see on others?

Answers will vary.

3. Would it be possible to categorize the concepts on your map? What categories would you use to sort your concepts?

Answers may include: categorizing by scale — concepts that impact an individual, family, community, region, or the world; categorizing by theme — concepts that impact the environment, human society, or the economy; categorizing by impact — concepts with a positive, negative, or neutral effect.

SAMPLE WEB