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Title of Lesson: Impact of World Population Growth

Objectives: As a result of this lesson, students will

- Draw the world population graph
- Discuss social changes that have impacted the graph
- Track the change in the population over 10 minutes
- Discuss impacts of world population to agriculture and vice versa.

Background:


- ◆ Second lesson of 8<sup>th</sup> grade Agriculture Explorations unit, “What is agriculture?”
- ◆ LifeKnowledge Precepts:
  - MS 2: Defining Personal Growth
  - MS 57: Finding Opportunities to make Positive Change

Logistical Information: 90 minute block class

- Computer w/internet access, [www.census.gov/ipc/www/world.html](http://www.census.gov/ipc/www/world.html)
- Calculators
- Copies of Worksheet

Interest Approach:

How has the world population changed in the last 100 years? Draw an axis on the board.

Do you recognize this? What are axis usually used for? Listening for Graphs. 

I have five markers located around the room, when I say go, search for the markers, if you find one, report to the front of the room, go.

Congratulations, you have won the chance to predict what the world population has done over the last 100 years, if you don't know, just guess.

Take a student vote whose like do you think is the closest?

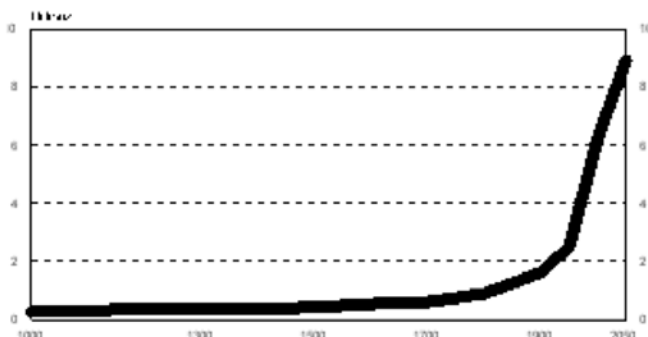
Reveal the correct answer after a drum roll by the class.

Summary of Content, Instructional sequence, Activities, and Strategies

*What factors have made the world population change so drastically over the last 100 years?*

Objective 1: Draw the world population graph

**World Population Growth 1000-2050**





Students, take a moment to copy this information into your notebooks.

As you can tell, the population has changed drastically in the last few years, think to yourself and be prepared to answer, what factors do you believe caused this change.

*Pause for think time.*

*Call on select student to share.*

Objective 2:

E-Moment: Me, You, Us.

When I say go, get a piece of paper from the scrap bin, fold it into 1/4<sup>th</sup> like this, and title the sections, me, you, us, summary. You have three minutes, go. *Demonstrate this as you give directions.*

Next, under the “me” section answer the following question with statements, drawings etc. What factors do you believe have made the world population change so drastically over the last 25 years? *(questions will be revealed on board, projector etc.)* You have two minutes to brainstorm your answer to this question.



*Time the two minutes.*

Time is up, move to the you section, with the person sitting closest to you, compare your thoughts and write new ideas in the us section, you have two minutes, go.

*Time the two minutes.*

Next, you will discuss with another group for two minutes, go.

*Time the two minutes.*

Finally, on your own, summarize the information you have gathered selecting the three top reasons you have found for the population change.

Who would like to share their thoughts?

Let's look at what the data says....



1. Trade revolution

*The trade revolution allowed us to circulate goods among people, spreading the wealth of foods, medicine, etc*

2. Agriculture revolution

*The agriculture revolution increased yields and strengthened farming practices so each farmer could produce more.*

3. Medical advancements

*Medical advancements increased the number of infants born alive, increased the life span, and the quality of life.*

Objective 3: Track the population change over 10 minutes.

*Set up the computer to the census website before class if possible.*

As a class, we will track the changes in the world population for the next 10 minutes. Who will volunteer to run the computer? Who will be a timer? We will refresh the computer on the world pop clock every minute for then next 10 minutes. I will read out loud the number that should be listed under the following columns “actual time” and world population”

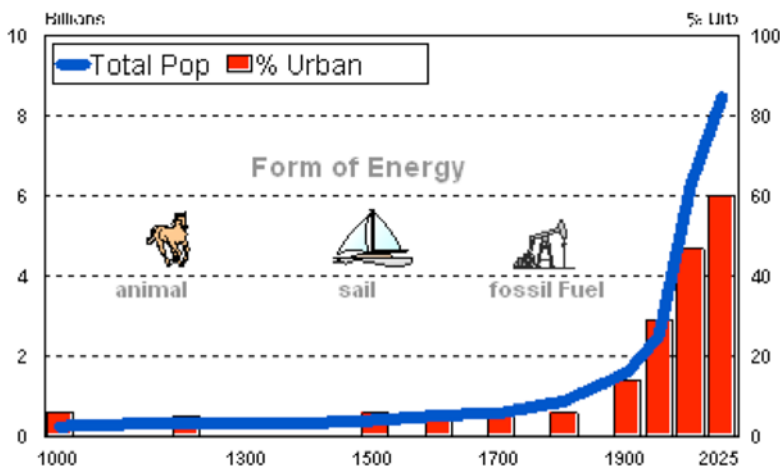
Track changes for 10 minutes. *This is a activity goes quickly, be sure to read the numbers as soon as they come up on the computer. If students do not get the all of the information, tell them we will catch up later. Complete a worksheet yourself, so that you can help students get all of the information after the 10 minute are up.*

What surprised you? Is it a constant change? You will learn more about this information as you complete the worksheet in the next 15 minutes, you may use a calculator.

Objective 4:

One might think that with this type of increase in the population, we should all be starving, anyone hungry out there? With this type of increase in population, how are we able to feed everyone?

World wide the form of energy has changed with the increase in population allowing us to produce more.



Do you believe the US raises more or less food products than they consume? Why or why not?

The United State produces significantly more food then needed, why do you think?


*Elicit ideas from the students...lead them to the following on the board...*

1. *Technology advancements (discuss examples, increased yields, hybrid seeds, machinery efficiency)*
2. *Fertile soil*
3. *Favorable growing conditions*

## Review

E-moment: Eye Witness News report.

*Each student will summarize the information we went over today, and can research more data to support their point. They will create a 30 second summary in the form of a news report over the data. Depending on time and the students, they can just give the news report to the class or work with a partner to interview each other.*

How many of you watch the news? What are the reporter's stories like? 

*Elicit answers: short, informative, based on research, some interviews, etc.*

During the next 10 minutes you will summarize the information we discovered to into a 30 second summary or news report, much like you would see on TV. You may utilize the computers to research more information to prove your points. What questions do you have? You may begin.

*Allow for at least 10 minutes, if working well, an extension of time could be earned by the students.*

Who would like to share their reports?

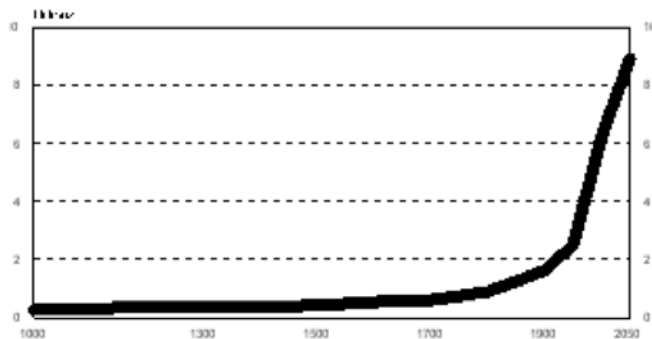
*Share and discuss ideas from the news reports as a class.*

Evaluation w/Answer Key

Answers:

1.

**World Population Growth 1000-2050**



2.
  1. Trade Revolution
  2. Agriculture Revolution
  3. Industrial Revolution
  4. Medical Advancements

3. The change is consistent over each minute, but if they did not refresh at exactly one minute, population change may vary.

4. Energy Fuel Sources have changed

## 5. More

Overhead Masters/Printed Copy of Power point slides

