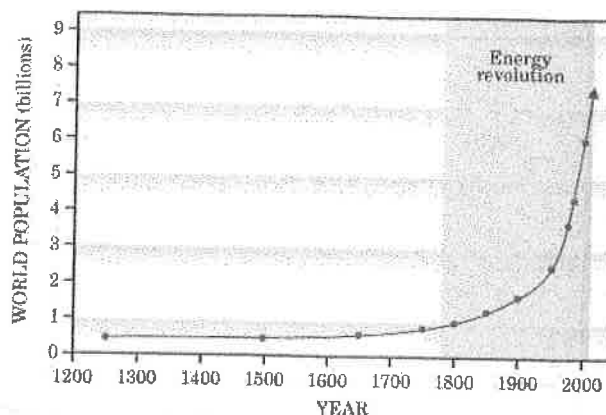


Name _____

Period _____
Due date _____

HUMAN IMPACT (INTERNET LAB)



The Industrial Revolution marked a major turning point in Earth's ecology and humans' relationship with their environment. The Industrial Revolution dramatically changed every aspect of human life and lifestyles. From human development, health and life longevity, to social improvements and the impact on natural resources, public health, energy usage and sanitation, the effects were profound.

During the 20th century, the world population would take on exponential proportions, growing to six billion people just before the start of the 21st century. That's a 400 percent population increase in a single century. Since the 250 years from the beginning of the Industrial Revolution to today, the world human population has increased by six billion people!

Human population growth is indelibly tied together with increased use of natural and man-made resources, energy, land for growing food and for living, and waste by-products that are disposed of, to decompose, pollute or be recycled. This exponential population growth led to the exponential requirements for resources, energy, food, housing and land, as well as the exponential increase in waste by-products.

In this laboratory activity, you will begin to examine the growth of the human population and our impact on the health of the planet.





PART I: BRAINPOP

1. Go to www.brainpop.com
2. Click on LOGIN: For Username: **nt** For Password: **student** Then click "go"
3. In the search box type in "**Humans and the Environment.**" Click on the box that says "Humans and the Environment – What can you do to make a real difference?"
4. After it loads automatically, click on "Click here to play the movie" Then watch the short video.
5. When the movie ends, take the attached "Humans and the Environment" Quiz. HINT: You can take the "Review Quiz" online at the same time if you want to get all the right answers.
6. Now type in "**Population Growth**" in the search box. Watch this video clip then take the attached Quiz and the Word Search Puzzle.



HUMANS AND THE ENVIRONMENT

1 Which of the following is an example of a nonrenewable resource?

- A 
- B 
- C 
- D 

2 Which of these is an opinion about deforestation?

- A It can cause animals to lose their habitats
- B It's a serious crisis that our government should try to stop
- C It happens because people use wood to make paper and lumber
- D Deforestation destroys important sources of oxygen

3 What can you conclude from the fact that the human population is so much larger today than it was 200 years ago?

- A Most people chose not have children 200 years ago
- B People 200 years ago killed one another frequently
- C People 200 years ago had better medicine than we do today
- D People today live longer, healthier lives than 200 years ago

4 The human population has experienced unchecked growth for the past 200 years. What does "unchecked" mean?

- A Slow
- B At a steady rate
- C Unrestrained
- D Dangerous

5 Which of the following is a true statement about recycling?



- A Recycling allows resources to be reused, instead of dumped in landfills
- B Recycled products emit oxygen into the atmosphere
- C Recycling causes the earth to cool down, instead of warm up
- D Recycling turns non-renewable resources into renewable ones

6 Place the following events in sequence: A) The world population reaches 6 billion; B) The Industrial Revolution begins; C) People begin packaging things in plastic

- A C, B, A
- B A, C, B
- C B, A, C
- D B, C, A

7 What is one negative effect of landfills?

- A Global warming
- B Water pollution
- C Air pollution
- D Deforestation

8 What do carbon dioxide and methane have in common?

- A They are gases created when wood is burned
- B They are gases that regularly escape from landfills
- C They are gases that contribute to global warming
- D They are examples of non-renewable resources

9 Which of the following can decrease the use of fossil fuels?

- A Turning your lights off when you're not using them
- B Recycling newspapers
- C Cleaning up the garbage in your neighborhood
- D Turning up your thermostat whenever you feel chilly

10 What is one way that you can use your voice to make environmental changes? Choose the best answer.

- A Ask your parents or guardians to use clean energy
- B Buy stuff with protective plastic packaging
- C Encourage your parents or guardians to drive cars to work, instead of taking buses or trains
- D Stop using all paper products

1 What might happen if the earth exceeds its carrying capacity?

- A There might not be room for people to move around
- B There might not be enough food and water for everyone
- C The continents might sink into the oceans
- D Most of the people on the planet would starve

2 Which of the following describes a population?

- A The total number of people, animals, and plants in New York City
- B The total number of houses in Atlanta
- C The total number of people living in the state of Texas
- D The total number of fish in all the world's oceans

3  Which of the following is a true statement about deforestation?


- A Once trees are cut down, they can never grow back again
- B Trees provide humans with the carbon dioxide we need to breathe
- C Animals lose their habitats when too many trees are cut down
- D Wood and paper products cannot be recycled

4 If the world population keeps growing at its current rate, how many people might be alive in 10 years?

- A 14 million
- B 22 billion
- C Between 7 and 8 billion
- D 1.5 trillion

5 Which of the following would be a good step to take to reduce the waste you produce?

- A Ask your parents to buy you your own car
- B Try to reduce your consumption of electricity and fuel
- C Use only electric appliances in your home
- D Only buy products with vacuum-sealed plastic packaging

6  Why are solar and wind power considered alternative energy sources?

- A They are an alternative to non-renewable energy sources like fossil fuels
- B They are used by people in alternative communities
- C They use alternating current instead of direct current
- D You can alternate between using solar power during the day and wind power at night

7 Why would advances in medicine lead to population growth?

- A Curing deadly diseases allows people to live longer
- B People are unable to have babies without medical help
- C Babies do not grow if they don't take their medicine
- D New drugs allow mothers to have multiple births, like octuplets

8 Before 1800, the infant mortality rate was much higher than it is now. What does that mean?

- A People didn't have a lot of babies before 1800
- B Children did not grow very tall before 1800
- C Most women were unable to have babies before 1800
- D A lot more babies died during childhood before 1800

9 How can population growth lead to more pollution?

- A Too many people breathing causes too much carbon dioxide to enter the atmosphere
- B The body heat generated by billions of people leads to an increase in global warming
- C More people being born means more paper is needed to print birth certificates
- D All people produce waste, so more people equals more waste

10 Which of the following terms best describes the current rate of world population growth?

- A Slack
- B Leisurely
- C Gradual
- D Rapid

SCIENCE > OUR FRAGILE ENVIRONMENT > POPULATION GROWTH

WORD FIND

* THE FIRST LETTER
IS DONE FOR YOU *

Complete the clues, and then find the answers in the letter square. Words may go across, up and down, or diagonally.

S	R	T	C	I	K	W	F	A	A	R	E
Q	E	R	D	O	T	D	E	H	A	A	J
C	R	E	C	Y	C	L	I	N	G	N	F
L	I	O	P	V	E	H	T	C	N	D	P
R	O	S	Q	S	G	A	T	D	L	G	B
S	S	F	E	X	V	Q	S	S	N	A	T
U	P	O	P	U	L	A	T	I	O	N	A
L	Q	E	L	I	R	S	Y	C	N	R	W
R	R	R	S	A	E	R	L	R	A	E	M
L	V	S	N	R	R	A	G	D	K	M	N
E	O	N	O	A	E	E	O	I	R	C	D
F	U	F	C	W	I	I	K	S	Q	D	F

- Total number of individuals in a particular area: P
- Maximum number of individuals a particular place can support: C capacity
- Important natural resource that is at risk of being used up: F fuels
- Clearing of these has a harsh effect on animal populations: F
- Alternative energy source that harnesses the power of the sun: S
- Doing this with empty soda cans helps conserve natural resources: R

PART 2: US CENSUS DATA

7. Log onto www.census.gov Look at the “**Population Clock**”

What is the current US Population? _____

What is the current World Population? _____

8. Click on “**Learn More**”

Estimates are:

One birth every _____ seconds

One death every _____ seconds

One international migrant every... _____ seconds

Net gain of one person every _____ seconds

TRUE or FALSE: According to these estimates, the US population is growing _____

PART 3: WORLDOMETERS

9. Log onto www.worldometers.info

10. Scroll down the page to answer each of the following:

A. The Current World Population is (circle one): INCREASING DECREASING

B. Which is more? BIRTHS THIS YEAR DEATHS THIS YEAR

C. Which is more? CARS PRODUCED COMPUTERS PRODUCED

D. How many cell phones were sold today? (Approx.) _____

E. How much money was spent today on video games? (Approx.) _____

F. How many google searches today? (Approx.) _____

G. Forest loss this year in hectares (this is about the space of 10 homes & yards in NT) _____

H. Which is more? UNDERNOURISHED PEOPLE OVERWEIGHT PEOPLE

I. People who died of hunger today _____

J. How many people with no safe drinking water source? _____

K. Which is more? NON-RENEWABLE RENEWABLE
ENERGY SOURCES ENERGY SOURCES

L. Solar energy is: INCREASING DECREASING

M. Oil barrels left is: INCREASING DECREASING

N. How many cigarettes were smoked today? (Approx.) _____

