Inconvenient Truth

Study Guide

**Answer the following questions as we watch the movie. I will pause often, but feel free to ask me to stop it if you need me too.**

What is Global Warming and Climate Change?

1. What is one of the most vulnerable (easily harmed) parts of the earth?
2. Why is the atmosphere so vulnerable?
3. Why is it good that our atmosphere traps some heat in?
4. Stop and explain in your own ***words and pictures*** what the greenhouse effect is:
5. Why is it bad that the heat is trapped and can’t get out?

How did Al Gore Come to Care About this issue?

1. Roger Revelle was Al Gore’s college professor. He was the first person to propose measuring \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the atmosphere.
2. When the scientists sent weather balloons into the air to measure the carbon monoxide levels they launched them from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pacific because it is most remote.
3. What year did Roger Revelle start measuring CO2 in the air?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What is the difference from 1970 in Kilamanjaro to 2006?
5. What is happening at Glacier National Park?
6. In the Himalayas the glaciers melting causes a particular problem because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_% of all of the people in the world get their drinking water from the melt water coming off of the glaciers.
7. When Lonnie Thompson drills core drills into the ice he can measure how much \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was in the air when that particular snow fell. He can also use isotopes and specific thermometers to tell us exactly what the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was when that snow fell and that air bubble was trapped.
8. On the graph that Al Gore shows of CO2 emissions that go back 650,000 years through all six ice ages he says that the CO2 levels have never gone above\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ parts per million.
9. Today the CO2 amount in parts per million is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ above where it has ever been. Because of this, scientists think that it will go up even more within 50 years if people are allowed to continue burning fossil fuels at the rate we do now.

Al Gore claims that if we (every person) let this happen it is “deeply unethical.”

***Unethical means that it is against socially acceptable behavioral.***

1. Do you agree with him that it is unethical to continue on the path we are on regarding CO2 emissions? Why/why not?
2. What happened in Al Gore’s life that changed how he viewed life and the globe?

How is this affecting our world?

1. The ten hottest years on record have all happened in the last \_\_\_\_\_\_\_\_\_\_\_\_\_\_ years.
2. 200\_ is the hottest year on record.
3. In 2003 there was a heat wave in Europe that killed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ people.
4. When the oceans get warmer it causes bigger\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. In 2004 Japan had \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ typhoons that weren’t as publicized in the USA.
6. When hurricane Katrina first hit Florida it was a category \_\_\_\_\_\_\_\_\_\_\_\_ storm.
7. In a hurricane when it hits a spot where the water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is higher, the wind velocity increases, and the moisture content increases, causing a hurricane to get bigger, stronger, and more violently destructive.
8. Al Gore suggests that citizens need to decide how we \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to warnings that scientists give us about natural disasters.
9. In 2005 in Mumbai, India they had \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ inches of rain fall in one day. It was the highest rainfall in their history and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ people were killed.
10. At the same time one of Mumbai’s neighbors was having a severe\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

This is because global warming changes the amount of precipitation (water) worldwide and RELOCATES it as well.

1. Lake\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in Africa has dried up to almost nothing over the past few years.
2. Why are the “drunken trees” going every which way?

Canary in a Coal Mine #1: The Artic

1. The artic ice cap has gown down 40% in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_years.
2. Right now the artic ice cap acts like a giant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Scientists predict it will be completely melted within 50 years.
3. More than\_\_\_\_\_\_\_\_\_\_\_\_\_\_% of the sun’s energy is absorbed into the ocean instead of being deflected back into the atmosphere.
4. Al Gore compares the Earth to a big\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. Some of the changes that will happen will not happen slowly but they come with big\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**How are ecological systems being affected by global warming?**

1. Switzerland:
2. Pine Beetles:
3. Mosquitoes:
4. Infectious diseases:
5. Humans:

Canary in a Coal Mine #2: Antarctica

**Larsen Ice shelf- is an ice shelf that is made of two types of ice: land based ice masses, and water based ice masses.**

**When the water based masses began to melt and break away it caused the land based masses to break off also.**

1. Instead of refreezing, all of the rushing water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ through the ice like termites, making it look like Swiss cheese.
2. Scientists believe that if Greenland broke up and melted, or even if ½ broke up and melted that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ would have to be redrawn because the sea level would rise so much that it would change continents’ borders.
3. How will it affect coasts like Florida, San Francisco Bay, India, Beijing, Shanghi, The Netherlands, and Manhattan etc.?

What does he Think We Should do About This?

1. What is Al Gore’s goal for this presentation that he gives?

**California set a higher standard for gas mileage on cars sold in their state above the national average. Automakers tried to sue the state because they didn’t like the idea that they would have to improve their cars in order to sell them there.**

1. What car makers in other countries are succeeding in selling a lot of cars even with higher mileage standards?
2. What are some suggestions from the credits of what we can do to make a difference?