For MIPA day. December 10, 2010

# Global Warming

What can we do?

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Source materials : Gleason; Karecki,; Reif, (MIT)

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# What is global warming?





### **How Global Warming Works**

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Carbon Dioxide (CO<sub>2</sub>)

Fossil fuels (coal, oil, natural gas)



### Example of the Greenhouse Effect

The Sun's energy passes through the car's windshield.

This energy (heat) is trapped inside the car and cannot pass back through the windshield, causing the inside of the car to warm up.



What's the difference between "global warming" and "climate change"?



## Difference

#### **GLOBAL WARMING**

is the increase of the Earth's average surface temperature due to a build-up of greenhouse gases in the atmosphere.



### **CLIMATE CHANGE**

is a broader term that refers to long-term changes in climate, including average temperature and precipitation.



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# Why is global warming happening?



## **Burning of Fossil Fuels**



## Pollution from coal, natural gas, and oil

### We all use energy all day!















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# **Effects of Global Warming**

#### **Rising Sea Level**



#### **Increased Temperature**



## Habitat Damage and Species Affected



#### **Changes in Water Supply**



#### **Portage Glacier**

Alaska



2004

#### **Colorado River**

#### • Arizona





#### June 2002

#### **Dec 2003**

# When did global warming start?



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#### **Global Atmospheric Concentration of CO<sub>2</sub>**



#### U.S. Emissions Business as Usual



### **Our Goal**



Produce electricity efficiently

- Use electricity efficiently
- Vehicle efficiency
- Solar and Wind Power
- Biofuels
- Carbon capture and storage

# What's being done now to reduce our emissions?



Wind Power

Solar Power

**Fuel-Efficiency** 

# What can you do to help solve the problem?

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## Simple Things To Do (1)



Turn off your computer or the TV when you're not using it.

Take shorter showers. Heating water uses energy.





Keep rooms cool by closing the blinds, shades, or curtains.

Turn off the lights when you leave a room.





Use compact fluorescent bulbs.

# Simple Things To Do (2)



Dress lightly when it's hot instead of turning up the air conditioning. Or use a fan.

Dress warmly when it's cold instead of turning up the heat.





Offer to help your parents keep the air filters on your AC and furnace clean.

Walk short distances instead of asking for a



ride in the car.

Plant a tree.



Recycle.

# THANK YOU