



Interactive Youth Climate Education Slides

Montgomery County
Climate Team

Start!



Overview

With these slides, you will be able to

- gain a deeper understanding of climate change and how it affects our community
- learn about Montgomery County's Climate Action Plan
- make a personalized plan to help fight climate change

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What is Climate Change?

Key Terms:

- **Weather** - the specific conditions in the atmosphere—like a rainstorm or hot day—that happens over a few hours, days or weeks
- **Climate** - the typical weather conditions in an entire region for a very long time
 - **Climate Change** - the long-term alteration of climate caused by human activity
- **Fossil Fuels** - natural substances (such as coal, oil, and gas) that are found in the Earth's crust that are extracted to be used as a source of energy
- **Heat-Trapping Gases (AKA Greenhouse Gases)** - When we burn fossil fuels like coal and natural gas for energy, we add to the blanket of heat-trapping gases like carbon dioxide and methane that surround the planet.

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Play Game

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Climate Change Key Term Matching

Match the definition to its key term:

Start!

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Click on the term that matches the definition below:

the typical weather
conditions in an entire
region for a very long
time



climate

fossil fuels

energy

heat-trapping
gases



Correct!

climate

is the typical weather
conditions in an entire
region for a very long
time



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Ooops!

[Try again!](#)

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Click on the term the matches the definition below:

natural substances
extracted from the earth
for energy



weather

energy

fossil fuels

heat-trapping
gases



Correct!

fossil fuels

like coal, natural gas, and oil are natural substances extracted from the earth for energy



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Ooops!

[Try again!](#)

[Back to terms](#)

Click on the term the matches the definition below:

the specific conditions in
the atmosphere over a
short period of time



heat-trapping
gases

energy

fossil fuels

weather



Correct!

weather

is the specific conditions in
the atmosphere over a
short period of time



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Ooops!

[Try again!](#)

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Click on the term that matches the definition below:

gases that trap heat in the atmosphere and warm the planet, such as carbon dioxide



heat-trapping
gases

energy

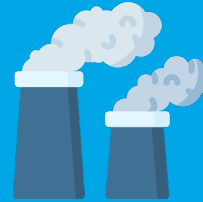
flammable
gases

climate
change



Correct!

heat-trapping gases
are gases that trap heat in
the atmosphere and warm
the planet, such as carbon
dioxide



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Ooops!

[Try again!](#)

What is Climate Change?

Now let's connect these terms:

Human activities, such as burning **fossil fuels** (like coal and natural gas) for energy increase the amount of **heat-trapping gases** in the atmosphere that contribute to **climate change**. Climate change affects the earth in many ways. Climate change increases the intensity of extreme **weather** events and causes the water levels in the ocean to rise.

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Click on a topic to learn more about:

The Effects of Climate Change

Montgomery County Climate Action Plan

How can I fight climate change?

Finished?

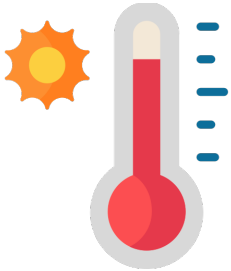


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The Effects of Climate Change

So, why is climate change such a big deal?

When excess greenhouse gases trap heat in our atmosphere, it negatively affects the environment, animals, and humans.



Warming temperatures: Heat-trapping gases like carbon dioxide and methane get thicker and trap more heat, causing average temperatures to rise all over the world. This increases heat waves and heat-related illnesses.

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The Effects of Climate Change

Rising sea levels: Warming temperatures caused by climate change causes glaciers and ice sheets around the world to melt.



Storms: Changes in climate changes rainfall patterns, increasing the amount and intensity of hurricanes and floods.



Wildfires: Climate change is causing warmer, drier conditions that allow wildfires to become more intense and burn for longer.



Droughts: Warmer and drier conditions caused by climate change increases the risk of drought in some places and makes them unsuitable for growing food.



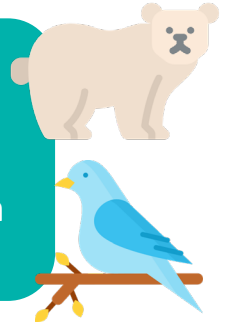
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The Effects of Climate Change

Animals

Extreme weather events caused by climate change results in the destruction of habitat. Loss of habitat leads to extinction of certain animal species. Climate change has also led to the change of behaviors in animals, such as hibernation and migration patterns.



Humans

Climate change affects many factors of human health – such as clean air, safe drinking water, sufficient food and secure shelter. Climate change is also forcing many people to leave their homes that have become uninhabitable due to natural disasters.



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The Effects of Climate Change

Climate Change Affecting Montgomery County

Warmer and more extreme weather in Montgomery County directly impacts the health of our streams and surrounding ecosystems.

According to The Conservation Fund, bay water levels in the Chesapeake Bay have risen about 1 foot in the past century and are predicted to rise between another 1.3 and 5.2 feet over the next century.

Extreme weather and rising waters lead to coastal flooding and erosion, damaging the ecosystem and infrastructure nearby.

While flooding impacts residents from a wide range of demographics, it is most damaging to low-income, minority groups because the majority live in neighborhoods with little or no green spaces to absorb water and in areas that have historically received less flood protection investment.

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Montgomery County Government **Climate Action Plan**

The **Climate Action Plan (CAP)** is Montgomery County's strategic plan to lower greenhouse gas emissions. It details the effects of a changing climate on Montgomery County and includes strategies to reduce greenhouse gas emissions and climate-related risks to the County's residents, businesses, and the built and natural environment.

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Montgomery County Government **Climate Action Plan**

The Vision

Montgomery County....

- uses and invests in clean, reliable, affordable electricity
- is home to resilient and efficient buildings
- safely, affordably, and sustainably moves people and connects places.
- has conserved and enhanced its nature-based solutions, including forest, meadow, and wetland ecosystems, greenspaces, and trees, while reversing carbon dioxide emissions
- is equipped with the resources and infrastructure to withstand the impacts of climate change
- fosters creativity and collaboration to develop climate solutions
- motivates community members to take action against climate change

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How Can I Lower the Impacts of Climate Change?

Click on an icon to learn more about what you can do to fight climate change. After clicking all three icons, click “Let’s make a plan!” to make your personalized list of actions.



Let's make a plan!

Reduce Your Carbon Footprint



Your carbon footprint is the **amount of carbon dioxide released into the air** because of your own energy needs. The energy you use for transportation, electricity, food, clothing, and other goods contributes to your carbon footprint. Your choices can make a difference.

You can reduce your carbon footprint by conserving energy. Some examples:

- Walk, bike, ride the bus, or carpool when possible.
- Turn off the lights when no one is in a room.
- Take shorter showers.
- Plant trees, which absorb carbon dioxide from the atmosphere, to offset your own carbon emissions. Use reusable shopping bags, water bottles, straws, etc. to prevent plastic waste.

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Tell Others



Talk to others about climate change to raise awareness. Raising awareness will influence others to take action and help fight climate change. Start by asking your friends and family what they know about climate change and having a conversation with them. Consider joining a climate action or environmental club at your school, or even starting one if there isn't one already.

Tips for talking to friends and family about climate change:

- Make your message personal and relatable.
- Acknowledge their responses and point of view.
- Reference specific actions they can take.

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Keep Learning



Keep educating yourself about climate change to empower yourself with knowledge. Stay in the know about Montgomery County's climate efforts by visiting the County's Climate Website. Watch the news and read articles to see what our leaders are doing to fight climate change, and how you can help.

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Visit MoCo Climate
Website (exit slides)



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My Climate Action Plan

Based on what you have learned, make a list of 5 specific actions that you can take in your own life to fight climate change. Make your list on a piece of paper or an editable copy of this presentation.
Ex. "Limit my shower time to 5 minutes."











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For inspiration:
CAP What Can I Do?
(exit slides)

Restart

Congrats! You've completed Montgomery County Climate Team's Interactive Youth Education Slides

Next Step: Energy and Transportation - Interactive Youth Climate Education Slides

To learn more about climate change, visit the resources below:



[Nasa Climate Kids](https://climatekids.nasa.gov/) is an educational website with activities, resources, and games to teach kids of all ages about Earth's systems, water cycle, weather and climate.



[Climatedu](https://mygreenmontgomery.org/2020/climate-change-at-the-local-level-protecting-our-watershed/) is a student-led initiative that offers a free, online seven-unit course on climate change.



The [AMHN Ology's climate page](https://mygreenmontgomery.org/2020/climate-change-at-the-local-level-protecting-our-watershed/) offers games, stories, and hands-on activities to educate kids about climate change.

CREDITS: <https://climatekids.nasa.gov/> <https://mygreenmontgomery.org/2020/climate-change-at-the-local-level-protecting-our-watershed/>

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