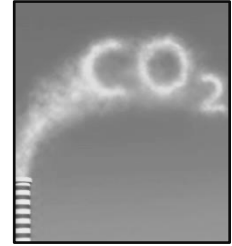


Name _____

Date _____

Climate Change Basics



- ✓ You'll find all the information you need to start learning about climate change on NASA's Climate Kids website:

<https://climatekids.nasa.gov>

<https://www.epa.gov/climatechange-science/basics-climate-change>

- ✓ You'll find lots of information on this site by clicking buttons, opening tabs, and clicking linked text. Don't forget to read the information in the sidebars, and to watch the videos!

1. Why is Earth getting warmer? _____

2. What are some effects of Earth warming up? _____

3. How do harmful gases get into the air? _____

4. Why have we begun to see abnormally severe weather events around the world, such as longer, harsher droughts in some areas, and fiercer storms causing unusual flooding in other areas? _____

5. What's the difference between weather and climate? _____

6. What are greenhouse gases? How do they cause global warming? _____

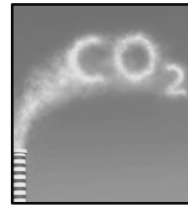
7. Draw a picture of the greenhouse effect. Use arrows with labels to show action.



8. How do scientists know that Earth is warming and the climate is changing? What do they do to discover the scientific evidence? _____

9. If you've finished all of the questions on this sheet, take a break and play some games: <https://climatekids.nasa.gov/menu/play/>

ANSWER KEY



Climate Change Basics

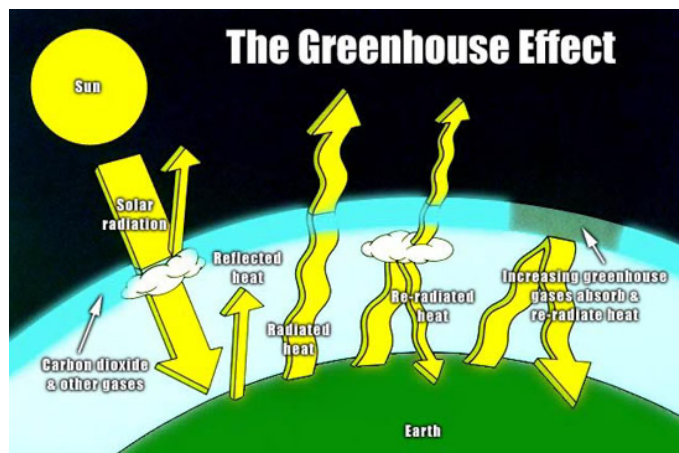
- ✓ You'll find all the information you need to start learning about climate change on the NASA Climate Kids website:

<https://climatekids.nasa.gov>

<https://www.epa.gov/climatechange-science/basics-climate-change>

- ✓ You'll find lots of information on this site by clicking buttons, opening tabs, and clicking linked text. Don't forget to read the information in the sidebars, and to watch the videos!
1. Why is Earth getting warmer? *People are polluting the air. They are adding heat-trapping gases to the atmosphere, mainly by burning fossil fuels (coal, oil, gas).*
 2. What are some results of Earth warming up? *Earth's climate is changing, higher temperatures, more droughts, wilder weather, changing rain and snow patterns, less snowpack, melting glaciers, shrinking sea ice, thawing permafrost, increased ocean acidity, warmer ocean, rising sea level.*
 3. How do harmful gases get into the air? *The gases come from people burning coal, oil, and gas.*
 4. Why have we begun to see abnormally severe weather events around the world, such as longer, harsher droughts in some areas, and fiercer storms causing unusual flooding in other areas? *Air, water, and land are all linked. They have an impact on each other. Warmer air causes more evaporation from land surfaces, causing more droughts. Warmer air also causes the ocean to warm, causing more evaporation from the ocean surface, creating stronger storms and more tornados.*

5. What's the difference between weather and climate? *Weather is what you have on a daily basis. Climate is the average weather in a certain place over many years (decades).*
6. What are greenhouse gases? How do they cause global warming? *The greenhouse gases are carbon dioxide and other gases (e.g., methane, nitrous oxide, etc.) in the atmosphere. They trap the sun's heat near Earth causing the planet's global temperature to rise.*
7. Draw a picture of the greenhouse effect. Use arrows with labels to show action.



8. How do scientists know that Earth is warming and the climate is changing? What do they do to discover the scientific evidence? *Scientists examine historical records; collect measurements; and observe trends in temperature, weather patterns, sea level, and other features of the environment. They use satellites and other instruments to measure the amount of greenhouse gases in the air all around the world. They examine air bubbles in ice to see how much carbon dioxide was in the air thousands of years ago.*
9. Climate games for students who finish early (Also, a great Friday afternoon activity!): <https://climatekids.nasa.gov/menu/play/>