Examining Evidence that the Earth’s Average Global Temperature is Increasing

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| TABLE IV.2  Powerful Ideas about evidence that the Earth’s average global temperature is increasing | | | |
| Sketch of set up  or URL | Evidence | Powerful Idea | Relevant Vocabulary |
| <https://climate.nasa.gov/climate_resources/139/graphic-global-warming-from-1880-to-2018/>  <https://climate.nasa.gov/vital-signs/global-temperature/> |  | Visual displays can communicate complex information in compelling ways | Temperature anomaly  Line graph |
| <https://climatekids.nasa.gov/climate-change-evidence/>  <https://oceanservice.noaa.gov/education/planet-stewards/talking-about.html>  <https://www.epa.gov/climate-indicators/oceans>  <https://www.bloomberg.com/graphics/2015-whats-warming-the-world/> |  | Many agencies are developing websites to help children, teachers, and the general public learn about the evidence that the Earth’s climate is changing |  |
| [www.ipcc.ch](http://www.ipcc.ch)/about |  | In 1988, scientists formed a worldwide organization to collect, analyze, and communicate scientific findings about climate change | Intergovernmental Panel on Climate Change (IPCC) |
| <https://www.ipcc.ch/report/ar5/wg1>  <https://www.ipcc.ch/report/ar5/wg2/>  <https://www.ipcc.ch/report/ar5/wg3/>  <https://www.ipcc.ch/report/ar5/syr/> |  | IPCC provides detailed reports about :  I: The Physical Science Basis;  II: Impacts, Adaptation, and Vulnerability;  III: Mitigation of Climate Change;  and a Synthesis |  |
|  |  | These reports include information for scientists and policy makers about both natural and human causes of climate change | anthropogenic |
| <https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf> (page 3) |  | Some graphs show differences between a particular measurement and the average of a collection of similar data | anomaly |
| <https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf> (page 3) |  | There has been an increase in the global average temperature. |  |
| <https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf> (page 3) |  | There has been an increase in the global average sea level. |  |
| <https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf> (page 3) |  | There has been an increase in the average atmospheric concentration of greenhouse gases (carbon dioxide, methane, and nitrous oxide) |  |
| <https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf> (page 3) |  | There has been an increase in emissions of carbon dioxide from various human activities since 1850 |  |