



NOAA High School **Climate** Resources



A little background on NOAA: NOAA is the National Oceanic and Atmospheric Administration. NOAA is part of the Federal government under the Department of Commerce. In Boulder NOAA shares a campus with NIST (National Institute for Standards and Technology). Boulder is also home to NCAR, the National Center for Atmospheric Research. NCAR is not part of the government, but largely funded by NSF. NCAR and NOAA often have similar research interests and our scientists work together.

NOAA is headquartered in Silver Spring, Maryland and there are NOAA facilities in many locations across the US. Boulder is one of the largest NOAA sites. Boulder is home to the [Space Weather Prediction Center](#), the [local forecasting office](#) of the National Weather Service, the [Global Monitoring Laboratory](#), the [Physical Sciences Laboratory](#), the [Chemical Sciences Laboratory](#), the [Global Systems Laboratory](#), and one of two locations of the [National Centers for Environmental Information](#).

We want to help bring our science to the classroom. Our scientists research many topics related to climate, including: continuous measuring of **greenhouse gasses, solar radiation and ozone**; studying various components of air quality, such as **ground level ozone, VOCs, and smoke from wildfires**; researching water in all forms around the world - **Arctic ice, floods, droughts, atmospheric rivers, El Nino and La Nina**; and creating **weather models to help generate electricity** from wind and solar. You can check out our resources on our [Teacher Resource Page](#) and please email us with any questions or suggestions at noaa.boulderoutreach@noaa.gov.

Tour of NOAA Boulder

We offer tours of NOAA Boulder.

They are free and 90 minutes long. However, we do have a maximum group size of 40 people. You can see more [here](#) and email noaa.dsrc.tours@noaa.gov to schedule a tour.

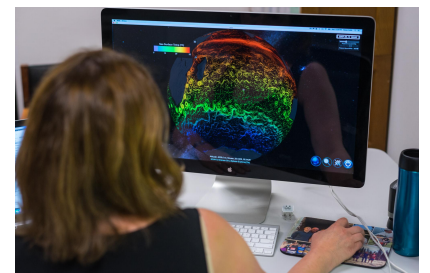


Virtual Scientist Visits

Our scientists can virtually visit your classroom to talk about a particular topic, their research and working as a scientist. This is a great opportunity for students to learn directly from a local scientist. Learn more on [this page](#) and fill out the form to request a visit.

Science on a Sphere Mobile

Science on a Sphere is an amazing visualization tool developed in Boulder. You can look at hundreds of datasets showing the earth and space. SOS Mobile is free on Apple and Android. Learn how to put it on your device [here](#). You can find information, tips and resources about using Science on a Sphere in your classroom [here](#).



Printable Resources

We develop printable information sheets and student activities related to the science of NOAA Boulder. Please email noaa.boulderoutreach@noaa.gov with suggestions for resources you would like to see.

Information Sheets

- Learn about [Measuring Greenhouse Gases around the World](#)
- Learn about [Stratospheric Ozone](#)
- Learn about [Floods and Drought](#)
- Learn about [Climate vs. Weather](#)
- Learn about [the Arctic](#)

Student Activities

- [Carbon Dioxide Data](#)
- [Thinking about Carbon Dioxide Measurements](#)
- [Create a Public Service Announcement or Infographic](#)
- [Where is the Ozone Layer?](#)
- [Ozone over Time](#)
- [Layers of the Atmosphere](#)
- [Plan an Arctic Expedition](#)

Videos with our Scientists

We have recorded our scientists explaining many topics related to climate. You can see all of our videos on [YouTube under NOAA Boulder](#).

- [Launching ozonesondes](#)
- [Inside the Dobson Lab](#)
- [Drones in Science](#)
- [Research on Planes](#)
- [Jet Stream and Polar Vortex](#)
- [The Science of Greenhouse Gases](#)
- [Arctic Ice Melt](#)
- [Floods, Drought and Climate Change](#)
- [Floods: Modeling and Prevention](#)
- [Colorado Forecasting Challenges](#)
- [Creating Weather Models](#)
- [Interviews with People of NOAA Boulder](#)

Story Maps

Story Maps are for students or teachers to gain background knowledge. They include imagery, short videos and student friendly language.

- [Adjusting to Climate Extremes](#)
- [Greenhouse Gases](#)
- [Air Pollution](#)
- [Forecasting the Weather](#)