

# 4-H Weather and Climate Youth Learning Lab: Activity Website Links

## Activity 1: Weather Data

NOAA, National Weather Service: [www.weather.gov](http://www.weather.gov)

SNOTEL: [www.wcc.nrcs.usda.gov/webmap](http://www.wcc.nrcs.usda.gov/webmap); <https://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

TimeandDate.com: [www.timeanddate.com/calendar/create.html?typ=5&cst=1](http://www.timeanddate.com/calendar/create.html?typ=5&cst=1)

## Activity 2: Weather and Climate Patterns

IR Thermometer: [https://www.youtube.com/watch?v=C\\_tXx8kmzZY](https://www.youtube.com/watch?v=C_tXx8kmzZY) and

<http://www.montana.edu/eu/climb/lessons/tempguns/CLIMB-MicroClimate-TempGuns.pdf>

U.S. Climate Data: [www.usclimatedata.com](http://www.usclimatedata.com)

Weather Underground: [www.wunderground.com](http://www.wunderground.com)

World Map of the Köppen-Geiger Climate Classification: <http://koeppen-geiger.vu-wien.ac.at/present.htm>

## Activity 3: Weather and Climate Extremes

Montana State University Science Zone: Tornado: <http://eu.montana.edu/pdf/outreach/msuscizone21.pdf>

National Climate Assessment 2014, Extreme Weather:

<https://nca2014.globalchange.gov/highlights/report-findings/extreme-weather#intro-section-2>

National Geographic, Weather Gone Wild:

[www.nationalgeographic.com/magazine/2012/09/extreme-weather-global-climate-change-effects/](http://www.nationalgeographic.com/magazine/2012/09/extreme-weather-global-climate-change-effects/)

National Weather Service SKYWARN Storm Spotter Program: [www.weather.gov/skywarn](http://www.weather.gov/skywarn)

NOAA tornado detection: [www.nssl.noaa.gov/education/svrwx101/tornadoes/detection](http://www.nssl.noaa.gov/education/svrwx101/tornadoes/detection)

## Activity 4: Weather Forecasts

NOAA, National Weather Service: [www.weather.gov](http://www.weather.gov)

NOAA, National Weather Service: [www.noaa.gov/stories/6-tools-our-meteorologists-use-to-forecast-weather](http://www.noaa.gov/stories/6-tools-our-meteorologists-use-to-forecast-weather)

NOAA, National Weather Service: [www.noaa.gov/stories/weather-prediction-its-math](http://www.noaa.gov/stories/weather-prediction-its-math)

NOAA, National Weather Service: <https://graphical.weather.gov/sectors/conus.php?element=T>

## Activity 5: CO<sub>2</sub>, Greenhouse Impacts and Climate

CO<sub>2</sub> in a bottle demonstration: [www.youtube.com/watch?v=kwtt51gvaJQ](http://www.youtube.com/watch?v=kwtt51gvaJQ)

Daily CO<sub>2</sub>: [www.co2.earth/daily-co2](http://www.co2.earth/daily-co2)

Google Earth software or app: [www.google.com/earth/versions/](http://www.google.com/earth/versions/)

University of East Anglia, Climatic Research Unit: <https://crudata.uea.ac.uk/cru/data/crutem/ge/> and download most recent

Google Maps .kml file, for example CRUTEM4-2018-06\_gridboxes.kml

## Activity 6: Understanding Recent Climates Through Tree Rings

Anatomy of a Tree: [www.arborday.org/trees/RingsTreeNatomy.cfm](http://www.arborday.org/trees/RingsTreeNatomy.cfm)

Tree Rings Simulation-Dendrochronology: [www.scied.ucar.edu/tree-ring-interactive](http://www.scied.ucar.edu/tree-ring-interactive)

## Activity 7: Oceans, Ice and Modeling Climate

Earth System Science Data: [www.earth-syst-sci-data.net/10/2141/2018/](http://www.earth-syst-sci-data.net/10/2141/2018/)

Salinity-Density Demonstration: [www.youtube.com/watch?v=bp7-xYG1D6s&feature=youtu.be](http://www.youtube.com/watch?v=bp7-xYG1D6s&feature=youtu.be)

University Corporation for Atmospheric Research Center for Science Education (UCAR SciEd):

[www.scied.ucar.edu/simple-climate-model](http://www.scied.ucar.edu/simple-climate-model)

## Activity 8: Where Does the Carbon Go?

Earth System Science Data: [www.earth-syst-sci-data.net/10/2141/2018/](http://www.earth-syst-sci-data.net/10/2141/2018/)

Our World, United Nations University: <https://ourworld.unu.edu/en/climate-changes-evil-twin-ocean-acidification>

## Activity Nine: Weather and Climate Together, Now and in the Future

U.S. EPA Carbon Footprint Calculator: <https://www3.epa.gov/carbon-footprint-calculator/>