

K. Weather and Climate Web sites

K-ESS2-1: Use and share observations of local weather conditions to describe patterns over time.

NOAA's National Weather Service

Enhanced Data Display

This product displays current observations such as: Temperature, Wind (knots), radar, satellite and can show forecasts for parameters (CONUS – can zoom in anywhere in the USA). You can use this tool to see how warm or cold their location is compared to other locations. This system can show cold fronts, radar imagery to track storm systems and more. This program needs minor training but it is a great tool to talk about the weather around a specific area or around the US.

<http://preview.weather.gov/edd/>

KESS3-2: Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. *

NOAA

What is the purpose of forecasting weather?

This website explains what a Weather-Ready Nation is. We forecast to understand upcoming events, and we prepare for events to mitigate disasters. (Link goes into detail about how the NWS is trying to reach that ultimate goal) – (probably more information than needed but provides in depth information)

<http://www.nws.noaa.gov/com/weatherreadynation/faqs.html>

SciJinks – Science HiJinks – NOAA/ NASA

How does a weather forecaster know what to forecast?

This is a great four minute video explaining how forecasters use satellites and model guidance to forecast.

<http://scijinks.gov/ask-a-weatherman/>

NOAA Awareness Information:

- [Awareness/Safety Owl Game:](http://youngmeteorologist.org/game/index.html)

<http://youngmeteorologist.org/game/index.html>

-Hurricane Challenge

-Lightning Challenge

-Flood Challenge

-Tornado Challenge

-Winter Storm Challenge

- [When disaster Strikes](http://scijinks.jpl.nasa.gov/disaster/)

<http://scijinks.jpl.nasa.gov/disaster/>

- [Severe Weather Safety:](http://www.lightningsafety.noaa.gov/safety.shtml)

Lightning

<http://www.lightningsafety.noaa.gov/safety.shtml>

Flooding

-Links for preparedness for a flooding event

<http://www.floodsafety.noaa.gov/before.shtml>

-Thunderstorms, Tornadoes, Lightning

-A PDF that goes into detail of what each of the topics are and safety tips for each weather event

<http://www.nws.noaa.gov/om/severeweather/resources/ttl6-10.pdf>

Hurricanes

-Hurricane Safety. How to prepare and where to get information

<http://www.nws.noaa.gov/om/hurricane/plan.shtml>

Winter

-How to dress – graphic

<http://www.nws.noaa.gov/om/winter/winter-images/Winter-Dress-Infographic.jpg>

-Winter Storms Booklet - Talks about how winter storms form and safety tips

http://www.nws.noaa.gov/om/winter/resources/Winter_Storms2008.pdf

K-PS3-1: Make observations to determine the effect of sunlight on Earth's surface.

UCAR – Center for Science Education

Effect of sunlight on earth's surface

This is a short article about the energy of the Sun.

<http://eo.ucar.edu/kids/sky/sun1.htm>

UCAR – Center for Science Education

This is a short article about why certain objects are warmer than others.

<http://eo.ucar.edu/kids/green/warming3.htm>

P. Earth and Sciences

P-ESS1-1

Tides and Currents – Talks about how the sun and moon impact the tides, which then create currents
<http://oceanservice.noaa.gov/education/pd/tidescurrents/welcome.html>

Tidal Variations – The influence of Position and Distance – How the moon impacts tides
http://oceanservice.noaa.gov/education/kits/tides/tides06_variations.html

Motions of the Sun and Planet

Seasons and Ecliptic Simulator – Shows how the sun impacts the planet during different seasons.
http://astro.unl.edu/naap/motion1/animations/seasons_ecliptic.html

Seasons Interactive – Shows how the earth is tilted and where it is in location to the sun each month of the year. This display also shows the number of hours of daylight and temperatures at different latitudes of the earth.
Click “Continue to Interactive”
http://www.sepuplhs.org/students/iaes/simulations/SEPUP_Seasons_Interactive.swf

Why does the Earth have seasons?
<http://scijinks.jpl.nasa.gov/earths-seasons/>

What is a solstice?
<http://scijinks.jpl.nasa.gov/solstice/>

P-ESS2-1

What is the difference between weather and climate?
<http://eo.ucar.edu/kids/green/what1.htm>

What happens at a particular time and place?
<http://scijinks.jpl.nasa.gov/weather-v-climate/>

Kids become citizen scientist! Record daily observations into national database
<http://scijinks.jpl.nasa.gov/cocorahs/>

Climate Prediction Center: Temperature & precipitation climate forecasts for one and three months out.
<http://www.cpc.ncep.noaa.gov/>