

*This support guide should be used as a framework for planning and in unison with the Units of Study. Explicit Common Formative Assessments (CFAs) for every unit are located in Mastery Connect under the appropriate standard.*

## **Standard:**

The student will **demonstrate** an **understanding** of the **daily** and **seasonal weather patterns**.

## **Conceptual Understanding:**

Weather is the combination of sunlight, wind, precipitation (rain, sleet, snow, and hail), and temperature in a particular region at a particular time. Scientists measure and record these conditions to describe the weather and to identify patterns over time. Weather scientists (meteorologists) forecast severe weather so that communities can prepare for and respond to these events.

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**NOTE:** The SC Computer Science and Digital Literacy Standards are in effect as of this school year. Embedding these standards into your lesson plans is not an option as we move our students towards 21<sup>st</sup> century learning in preparation of college and career readiness. The following information will be helpful in planning for the incorporation of these very important standards that students need to learn.

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## **Computer Science & Digital Literacy Standards:**

[https://ed.sc.gov/scdoe/assets/File/SCDE\\_Computer\\_Science\\_Digital\\_Literacy\\_Content\\_Overlay\\_Resource\\_Final\\_063017.pdf](https://ed.sc.gov/scdoe/assets/File/SCDE_Computer_Science_Digital_Literacy_Content_Overlay_Resource_Final_063017.pdf)

### **Digital Literacy--Standard 1:**

***Use software applications to create an authentic product.***

**2.DL.1.1:** Create text documents using a word processing program

**2.DL.1.2:** Format a text document using a word processing program (e.g., change font style, including underline, italicize, bold; change font size)

**2.DL.1.3:** Create a multi-slide presentation with graphics or images using presentation software (e.g., create a new slide; rearrange slides)

**2.DL.2.2:** Recognize how to credit work found online (e.g., image, photograph)

***I can use, format, create, and credit with...***

Microsoft Office 365 products—Sway, Word, One Notebook, Excel, PowerPoint, Keynote, and other productivity tools

[Nearpod](#) (Interactive presentation maker)

[Publisher](#) (Desktop publisher)

[SeeSaw](#) (Electronic Portfolio and work space—Apple)

[Padlet](#) (Paid subscription now for those who still are interested in using it)

[easel.ly](#) (Infographic Maker)

[canva](#) (Place to create products of learning)  
[Socrative](#) (on mastery connect site)  
[Animoto](#) (Creative presentation/video design maker)  
[PhotoStory](#)  
[Writereader](#) (ebook maker)  
[Blogger](#) (create way to communicate)

## Digital Literacy--Standard 4:

**Demonstrate effective keyboarding skills on a computing device.**

<https://www.education.com/games/second-grade/typing/> (different typing games)

**2.DL.4.1:** Locate and use letter, number, and punctuation keys.

**2.DL.4.2:** Demonstrate the use of function keys (e.g., shift, enter, backspace, delete, spacebar)

**2.DL.4.3:** Develop proper keyboarding technique when keying letters, numbers, and symbols (e.g., use both hands; utilize proper placement on home row keys; use letter, number, and punctuation

### *I can learn...*

- I can learn and use the "Home Row"
- I can learn and use the top row
- I can learn and use the bottom row
- I can use the Capitalize, Enter, Backwards buttons
- I can use the Space Bar

Keyboarding Rubric		
3	2	1
Student knows and uses Home Row	Student knows but needs help with finger alignment with Home Row	Student does not know or use the Home Row properly
Student knows and uses proper techniques for top and bottom row	Student knows but needs help with the top and bottom row	Student does not know or use the top and bottom row
Student knows and uses proper techniques for capitalization, spacebar, back button, delete	Student knows but needs help with the proper techniques for capitalization, spacebar, back button, delete	Student does not know or use the proper techniques for capitalization, spacebar, back button, delete

finger keys).

Example rubric: [www.rubistar.com](http://www.rubistar.com) (rubric generator)

## Computing Systems--Standard 1:

**Understand that computing devices are used to perform a variety of tasks and take many forms**

**2.CS.1.1 :** Classify computing devices according to purpose (e.g., navigation, game, communication, all-purpose)

Connections: Classify the computing devices that may warn of severe weather (e.g., weather applications, weather radio, sirens)

**2.CS.1.2 :** Recognize that computing devices have limitations (e.g., printing, screen size, mobility)

Connections: Recognize that severe weather warning devices have limitations (e.g., they cannot tell people what is happening at their specific addresses at a real moment in time)

**2.CS.2.2 :** Recognize software that controls computing devices (e.g., use an application to draw on the screen; use software to write a story or control robots)

Connections: Recognize software that controls computing devices, such as applications that show weather predictions, probes that measure temperature, and cameras that show animals in their natural habitat

**2.CS.2.3** : Use appropriate hardware and software to complete a given task

Connections: Use appropriate hardware and software to **write about or display information about weather**, matter, forces, and animals

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## **Network and the Internet--Standard 1:**

***Discover that computing devices and the internet enable us to connect with other people, (blogger) places, information, and ideas.***

**2.NI.1.1** : Gather information from the internet with supervision.

**2.NI.1.2** : Identify email as one way to communicate digitally.

**2.NI.1.3** : Use technology to work cooperatively and collaboratively with peers, teachers, and others.

Connections: Use technology to **work cooperatively to develop charts about weather**, matter, forces, or animals

### ***I can research...***

- *weather men/women*
- *Scientists who studied weather meteorologist*
- *Weather reporters*
- *map makers*
- *weather-related jobs*
- *regions and their weather*
- *weather*
- *climate*
- *severe weather*
- *Animal habitats (and how they hold up in bad weather)*
- *Best protection again severe weather (clothes, shelter, safety)*

### ***I can connect to...***

- *Weather stations*
- *Meteorologists (in different areas)*
- *Storm Hunters*
- *Astronauts in space (what do they see?)*
- *Other kids in different parts of the country to compare weather*
- *Zoos/Zoologists*
- *Other teachers/experts*
- *People in weather-related jobs*
- *Different books to locate information (AtoZ, BookFlix)*

## Data and Analysis Standard 1:

*Discover how data can be stored in and retrieved from multiple locations*

**2.DA.1.2:** Store data (e.g., image, music) to a computing device

Connections: **Store scientific data** to a computing device

**2.DA.1.3:** Retrieve data (e.g., image, music) from a computing device

Connections: **Retrieve scientific data, such as weather charts**, from a computing device

## Standard 2:

*Explore how computing devices collect and display data.*

**2.DA.2.1:** Identify different ways and tools to collect data

Connections: **Identify different ways and tools (i.e., thermometers, rulers, and scales)** to collect data

**2.DA.2.2:** Collect, organize, and display data using object graphs, picture graphs, and bar graphs

Connections: **Collect, organize, and display weather data using object graphs, picture graphs, and bar graphs**

## Standard 3:

*Explore how data can be displayed for communication in many ways*

**2.DA.3.1:** Recognize how different data displays communicate information in different ways

Connections: **Recognize how different data displays of weather data communicate information in different way**

**2.DA.3.2:** Transform data into a new representation (i.e., object graphs, picture graphs, bar graphs, charts)

Connections: **Transform weather data** into a new representation

**2.DA.4.1:** Draw conclusions and make predictions from different types of graphs (i.e., picture graphs, bar graphs)

Connections: **Draw conclusions, analyze data, and make predictions from different types of graphs about weather**, matter, forces, and animals

## What do the students need to know?

Weather conditions and how they work together (or not)

[Weather patterns \(and how to spot them\)](#)

Weather Data (how to use, collect, and interpret)

Observations (using 5 senses to observe weather)

[Measurements/Instruments](#) (precipitation, wind, temperature)

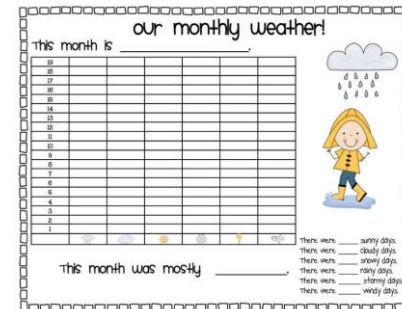
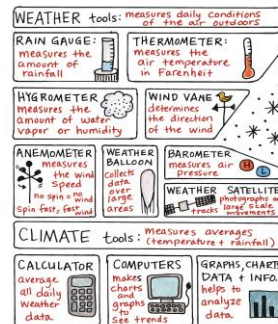
Models and what they are used for

Effects of Wind

Precautions/safety

Habitats/Shelter of different animals in different regions

Jobs of weathermen/women



Calendar/dates/months  
Different regions/maps/areas

## What do the students need to be able to **do**? “I Can” Statements:

**Demonstrate** an understanding of daily and seasonal weather patterns

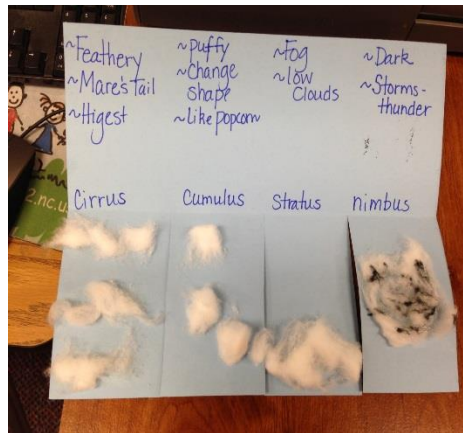
- Prove  
Validate  
Show  
Reveal
- I can demonstrate my understanding of daily and seasonal weather patterns by using a calendar or graph to:

### **Observe:**

See  
Witness  
Detect  
Spot  
Notice  
Look

#### **I can observe...**

- Precipitation
- Wind
- Clouds
- Daily Weather
- Seasonal Weather
- Regular weather
- Severe weather

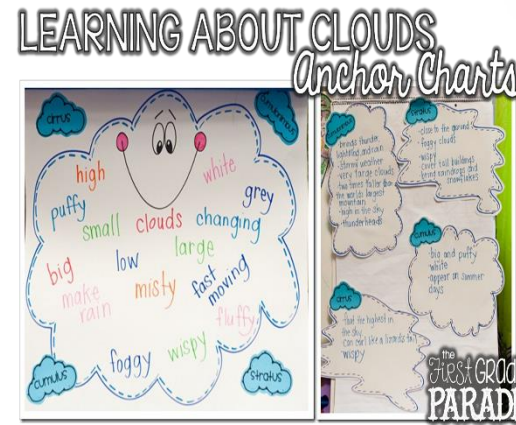


### **Describe:**

Label  
Define  
Designate  
Pronounce  
Call

#### **I can describe...**

- Different kinds of precipitation
- Wind



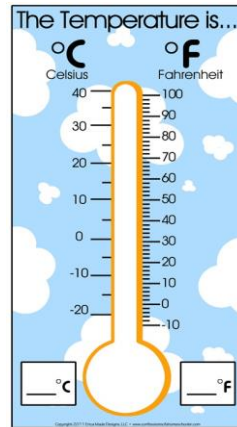
- *Clouds*
- *Effects of wind on objects*
- *Effects of regular weather*

### **Measure:**

Amount  
Degree  
Size  
Quantity  
Portion  
Direction

### **I can measure:**

- *Rain*
- *Snow*
- *Sleet*
- *hail (size/shape/weight)*
- *wind direction*
- *wind speed*



Read today's weather forecast in the newspaper or on the computer and record it here.  
Having fun and learning about weather!

### Weather Forecast

Today's Date: \_\_\_\_\_ (write out the month, day, and year)

Meteorologist: \_\_\_\_\_ (write name)

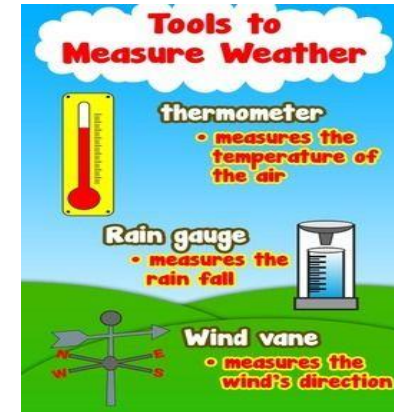
Current Temperature: \_\_\_\_\_ (write: °C or °F)

Current Weather: \_\_\_\_\_ (write: sunny, cloudy, rainy, windy, snowy, etc.)

Wind Direction & Speed: \_\_\_\_\_ (write: from the north at 10 miles per hour)

Today's Weather (draw a picture)	Tonight's Weather (draw a picture)	Tomorrow's Weather (draw a picture)
Today's High Temp: _____ Chance of Precipitation: _____ %	Tonight's Low Temp: _____ Chance of Precipitation: _____ %	Tomorrow's High Temp: _____ Chance of Precipitation: _____ %

Source: Teacher Resources: [www.teacherspayteachers.com](http://www.teacherspayteachers.com)



### **Record:**

Write  
Draw  
Collect  
Document  
Mark

Compose

***I can record...***

- Daily weather observations
- Seasonal weather observations
- Wind direction
- Wind Speed
- Cloud movement/types/characteristics
- Weather instrument measurements (Farenheight, Degrees, speed, directions)
- Effects of wind and/or precipitation on different objects

A template for a weather observation chart. It includes a title 'Weather Observation Chart', a space for 'Name' and 'Week of', and a table with columns for 'Monday', 'Tuesday', 'Wednesday', 'Thursday', and 'Friday'. The rows are labeled 'Temperature', 'Humidity', 'Clouds', 'Wind', 'Precipitation', and 'Air Pressure'. At the bottom, it says 'Created by Laura Lander - Teaching Resources - www.teacherspay.com'.

**Forecast:**

Predict (Designing a wind proof house)

Estimate

Guess

***I can forecast...***

- Daily weather
- Weekly weather
- Monthly weather
- Seasonal weather

A template for a weather forecast worksheet. It includes a title 'Weather Forecast Worksheet', a space for 'Name', and instructions: 'Have an adult help you look up the weather forecast using the newspaper, television or internet and fill out the details below.' It has sections for 'Tomorrow's high temperature outside will be', 'Tomorrow's weather will be', 'Chance of Precipitation', 'Wind Speed', and 'Humidity'. It also features a thermometer graphic with Fahrenheit and Celsius scales. At the bottom, it says 'Teacher Resources © Copyright © All Rights Reserved www.teacherspay.com'.

A template for a 5-day weather forecast. It includes a title 'My 5 Day Forecast', a space for 'Name', and a section for 'My Weather Predictions for the Week' with columns for 'Mon.', 'Tues.', 'Wed.', 'Thu.', and 'Fri.'. It also features a section for 'The Weather for the Week' with the same columns. It includes weather icons for 'Sunny', 'Cloudy', 'Stormy', 'Windy', 'Snowy', and 'Rainy'.

**Compare:**

Associate

Link

Relate

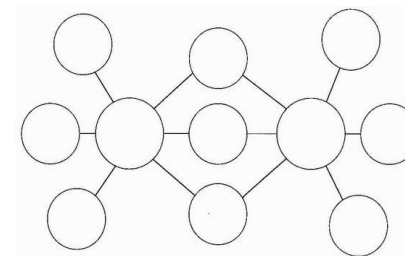
Equal

Match

Parallel

***I can compare...***

- Normal weather to severe weather.
- The 4 seasons
- Different cloud types to different weather events
- Different weather instruments
- What happens to animals in bad weather to what happens to people



*Multi-Flow Map (Compare/Contrast)*



- *What happens to plants in bad weather to what happens in regular weather*
- *A meteorologist to a weather man*
- *Different types of weather in different areas of our country*
- *How to prepare for different types of severe weather*

### **Explain:**

Clarify  
Enlighten  
Describe

#### ***I can explain...***

- *The different weather conditions using my 5 senses*
- *The instruments I would use to measure precipitation, temperature, and wind*
- *Safety precautions you should take in different types of weather*
- *Different cloud types*
- *Different effects of wind on objects*

### **Analyze:**

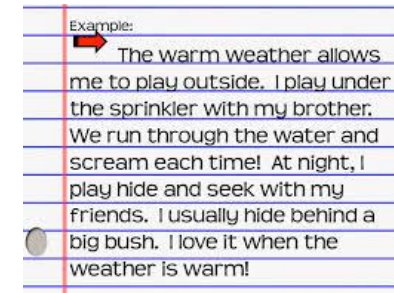
Examine  
Study  
Investigate  
Consider  
Question  
Explore

#### ***I can analyze...***

- *The calendar to determine different patterns of daily/weekly/monthly/seasonal weather*
- *Look at the clouds to analyze what type of weather can occur*
- *The amounts of rain and the effects on plants, animals, people*
- *My observation notes and drawings to see if I notice patterns*

### **Interpret:**

Understand  
Read  
Infer



Student example of describing



Analyze weather data – such as types of clouds to tell what kind of weather can occur.



***I can interpret...***

- *My calendar/journal/notebook drawings, explanations, observations to look for similarities and differences*
- *What animals and people do in different types of weather*

**Develop:**

Grow

Mature

Progress

Advance

Change

Improve

***I can develop...***

- *An instrument model that records temperature, precipitation, or [wind](#) (Designing a wind proof house)*
- *A graph of my weather data*
- *A graphic organizer of my comparisons of regular weather to severe weather*
- *A graphic organizer of how to prepare for different types of weather*
- *An information product to warn people of severe weather and to stay safe*
- *A technology product that explains my observations/patterns over time of different weather conditions*
- *A map of different places with a key that explains the usual weather patterns (climate)*
- *Drawings of different weather types, conditions, and preparations*
- *A How To Writing about preparing for a severe weather event*
- *A Photo story of different clouds and the weather they product (monthly/seasonally)*
- *A graphic organizer of the effects of wind on different objects*



Develop an instrument model (like an anemometer).

### Use:

Practice  
Procedure  
Habit  
Routine

### I can use...

- A thermometer
- An anemometer
- A rain gauge
- A camera
- A digital device to collect information
- A computer, printer, mouse, keyboard

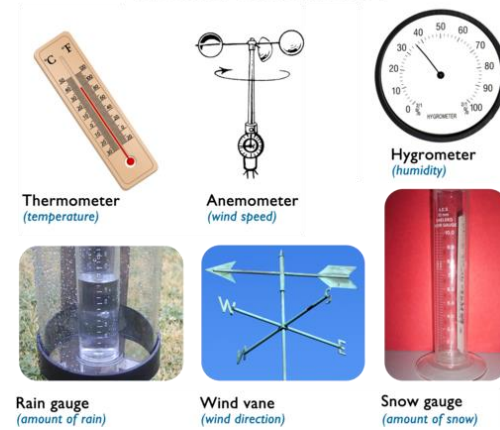
### Obtain:

Get  
Find  
Gain  
Acquire  
Take

### I can...

- Go to the internet to find information (properly and with guidance from my teacher)
- Get images of maps and weather conditions
- Find photographs of animals and people in different weather events
- Get videos of different weather events
- Use the computer to find Podcasts of different audio descriptions of weather events
- Get different local newspapers and find the daily weather
- Get an almanac to find out about weather predictions
- Different books or articles to read about weather-related jobs or events

### Weather Instruments



Weather conditions for Columbia:

[https://www.google.com/search?q=weather+conditions&rlz=1C1GGRV\\_enUS802US802&og=weather+conditions&aqs=chrome.0.69i59j0l5.76684j0j9&sourceid=chrome&ie=UTF-8&safe=active&ssui=on](https://www.google.com/search?q=weather+conditions&rlz=1C1GGRV_enUS802US802&og=weather+conditions&aqs=chrome.0.69i59j0l5.76684j0j9&sourceid=chrome&ie=UTF-8&safe=active&ssui=on)



### Communicate:

Connect

Link

Join

Transfer

Converse (Could be used as an assessment or conferencing tool)

Talk

***I can...***

- Talk about, explain, describe, create, draw, interview, ask and answer questions, compare, connect with other people in different states or countries, skype, video record, or demonstrate an understanding of weather and how it impacts plant, animal, and people's lives.

## Questions and Answers

- **Why are meteorologists important to me and my world? What is a meteorologist?**

*Divide the kids into 3 groups and conduct a Big 3 Information gathering activity. Provide 1 group with weather magazines and books, 1 group with a hotlist of weather videos about meteorologists and 1 group with a hotlist of sites to research meteorologists. The students will research and collaborate the information they found to present to the class. Be sure to create a rubric for the criteria of each final product they will present.*

- **What tools do meteorologists use?**

*After some background building, students will work together to create a model of any 3 instruments that measure weather.  
(Thermometer, Rain Gauge, Anemometer)*

*Be sure to give the students a criteria sheet for what you would like to see with their model. Test their models in real-time weather to see if they worked or not and discuss how close they were to the actual instrument. Fun "hook" activity.*

### Assessment Ideas:

*Matching the instruments to the task*

*Dragging weather instruments to their uses using the smartboard*

*Writing a "How To" Piece on different instruments*

- **Why do meteorologists track weather patterns and conditions, gather and record data and observations?**

### Research Activity:

*Divide into 4 research groups:*

*1) Weathermen and what they do*

*2) Meteorologists and what they do*

*3) Reporters and what they do*

*4) Storm Hunters and what they do*

*Come together to compare and contrast using a "Double Bubble" Map with paper plates. After the groups have compared and contrasted putting their information on paper plates, create a bulletin board showing the similarities and differences. Connect the plates with colored string.*

- **What conclusions can we draw from gathering and recording data and observations?**

*Drawing conclusion activity and then connect to the question*

- **How do we know that air is all around us?**

*Use a Circle Map to brainstorm all of the ideas the students come up with. Hand out large white paper plates to have students brainstorm the next question, "What is air?" Have students draw a center circle and write the question, "What is air?" using 1 dark color. (They will use the same color to brainstorm with) After a few weeks of learning, hand out their original paper plates. Have them use a different color to add any information that they have learned. Keep doing this until you think they are done, and display the paper plates as a bulletin board or authentic student work on wall.*

- **What is air?**

*Record a podcast at the beginning of the unit of what the students think air is. Record again at the end of the unit and play for the students. See if they can find the differences and have them write what is different in their journals.*

- **Does air take up space?**

*Using 5 objects (flexible, hard, soft, tall, short) conduct some simple experiments to see if they take up space. Have students draw their results and discuss afterwards.*

- **Is air strong or light and what are the effects?**

*Using a Cause and Effect Organizer, test strong and light air on different objects and their effects.*

*Use a blank Cause and Effect Organizer to assess later using different objects.*

- **Is air cool, warm or wet? How do can you tell?**

- **What evidence have you found to support that air can have moisture in it?**

- **Can air move objects?**

*Experiment and record observations*

*Make a model*

- **Explain how air can move objects?**

*Make models using the design process*

## Differentiation and Rtl Ideas

*(Great place to use these digital standards)*

### **Digital Literacy--Standard 1:**

*Use software applications to create an authentic product.*

### **Computing Systems--Standard 1:**

*Understand that computing devices are used to perform a variety of tasks and take many forms*

### **Data and Analysis--Standard 3:**

*Explore how data can be displayed for communication in many ways*

## Observing the Weather

Very [cool site](#) with weather information from all over the world.

- **Observe daily weather**

**Tier 1:** *Observe and describe weather in science journal*

**Tier 2:** *Observe and draw or describe weather in science journal*

**Tier 3:** *Observe and verbally explain or draw weather in science journal*

**Tier 4:** *Create a graphic organizer of the different weather observations*

- **Record data on calendar**

**Tier 1:** *Use a [digital calendar](#) to record data (Have students create one in Excel or Microsoft Outlook—example on this page)*

**Tier 2:** *Record data on class calendar*

**Tier 3:** *Use journal to draw daily observations of weather*

- **[Identify types of clouds](#) (Information and Assessment Tool)**

**Tier 1:** *Take photos of different kinds of clouds and create an [eBook](#) (writereader---great place to make ebooks)*

**Tier 2:** *Take photos of different clouds and label to put in science journal*

**Tier 3:** *Draw different types of clouds and put in science journal (electronically or on paper)*

- **Create and design weather instruments, including a thermometer and rain gauge using various of materials**

**Tier 1:** *Create a weather instrument with moving parts*

**Tier 2:** *Create a weather instrument with a team that has moving parts*

**Tier 3:** *Create a weather instrument with or without moving parts*

**Tier 4:** *Design and create a weather instrument and upload to SeeSaw to share with others for feedback*

- **Conduct local weather forecast broadcast**

**Tier 1:** *Write, develop, and share a comprehensive weather broadcast and display on the school's morning broadcast*

**Tier 2:** *Write and develop a comprehensive weather broadcast*

**Tier 3:** *Create visual displays of weather for the weather broadcast and label the drawings/photographs with appropriate names*

**Tier 4:** *Use technology to create a morning broadcast to feature on the school's morning broadcast*

## Wind Explorations

- **Observe evidence of wind speed, direction**

[https://www.sciencebuddies.org/science-fair-projects/project-ideas/Weather\\_p008/weather-atmosphere/how-does-a-wind-meter-work#background](https://www.sciencebuddies.org/science-fair-projects/project-ideas/Weather_p008/weather-atmosphere/how-does-a-wind-meter-work#background)

*Use models that students created and then test against real tools that measure wind speed, direction*

- **Create a variety of weather instruments, including an anemometer and wind vane**  
<http://www.ciese.org/curriculum/weatherproj2/en/docs/windvane.shtml>  
**Tier 1:** Using the [Engineering Design Tool](#), design a working weather instrument and create a “How To” booklet to share with others  
**Tier 2:** Using the Engineering Design Process Tool, design a working weather instrument  
**Tier 3:** With partners, modify a working weather instrument to make your own  
**Tier 4:** (AAP—design and use instrument to record daily weather)
- **Designing windmills and testing sail design**

#### Observing Changes in the Weather

- **Graph weather observations over time**  
**Tier 1:** Create an electronic product of graphing observations  
**Tier 2:** Serves as Graphing Expert recording daily weather  
**Tier 3:** Serve as weekly Meteorologist—checks and records daily weather  
**Tier 4:** Record (video/auditory) a monthly weather summary report of observations
- **Display a long piece of white bulletin board paper to track the daily weather observations**
- **Identify patterns and changes in weather conditions, precipitation, and temperature throughout the seasons**  
**Tier 1:** Create an [electronic graphic](#) of the weather patterns observed  
**Tier 2:** Draw a graphic/visual of the weather patterns observed  
**Tier 3:** Verbally record changes or patterns in weather
- **Use giant graph (bulletin board paper) for students to mark, track, and identify patterns and changes of weather**

#### Seasons

- **Identify characteristics of different seasons ([temperature](#), calendar months, precipitation)**
- **Collect data of different seasons in different geographic locations**  
**Tier 1:** Collect data and compare/contrast the different weather in different locations using an electronic graphic organizer or an original creation  
**Tier 2:** Collect data and share the differences in a graphic organizer in the science journal  
**Tier 3:** Research different seasons in 2 different locations and record the differences in science journal
- **Skype another class to become weather buddies with so you can compare climates each month. Compare and contrast the differences and discuss.**

#### Severe Weather Conditions

- **Safety precautions needed for floods, lightning storms, tornados, thunderstorms and snow storms**  
**Tier 1:** Create an electronic information product to warn people of 3 selected severe weather events  
**Tier 2:** Create a brochure or PowerPoint of 2 selected severe weather events  
**Tier 3:** Create a flyer (electronic or drawn) of 1 selected severe weather event



**Tier 4:** Create a PSA regarding preparations for 3 severe weather events

- **Describe the type of destruction storms cause to habitats and communities Conduct severe weather information broadcast**

**Tier 1:** Create a PhotoStory/Digital Story of the types of destruction storms cause and display/voice on school's broadcast

**Tier 2:** Create a news product describing the destruction of storms

**Tier 3:** Use a Flow Map to sequence the destruction of a severe storm and place it in science journal

### **Performance Task:**

- Create a structure to withstand an earthquake (Use design process)
- Create homes to be protected by rain, flood and/or wind using variety of materials
- Create a new shelter for an animal to withstand a severe storm

## **Teacher Modeling Ideas**

- **How wind moves objects---model for students using different strengths of air on different type objects.**

*Go outside each day with different objects for the wind to move. (Heavy and light) Have students record their observations in their notebook/journal and then create a conclusion of what wind does to different objects. Model how students can organize their information using different templates/drawings/organizers.*

- **How to appropriately use scientific tools (thermometer, rain gauge, wind vane, anemometer).**

*Show how to use each tool outside---have students take notes/photos and then sequence the directions back in their journals using a Flow Map for sequencing  
Create a PSA (Public Service Announcement) on the use of the different tools*

*Create a Podcast on the use of the different tools*

*Create a matching game (drawings) on the different tools and play with a partner*

*Create an Infographic ([www.easel.ly](http://www.easel.ly)) on the different tools and uses*

- **How to classify/compare using a variety of graphic organizers.**

*Create a Tree Map and Compare/Contrast Map to classify and compare (use on Smartboard every day so they learn how to use this graphic organizer for everything. This could be a morning routine each day*

*Create a Venn Diagram to classify or compare using Hula Hoops, Word (Draw on computer), paper to share*

- **How to assemble and create a weather station**

*Show students how to research (provide a Hotlist) to find information about weather stations and what goes in them. Collect a range of cardboard boxes and allow students to build their weather station each day to actually use when collecting their data/information. Place your giant graph inside, related books, clipboards, cameras, etc. so that kids get excited about going to their weather station each day. Invite the art teacher to help give it some flair, color, and an overall great look!*

- **How to record observations and data**

*Stretch out a giant piece of white bulletin board paper and hang it somewhere that the students can track the daily/seasonal weather. Model how to use it first for a few days and then release to the students as their career responsibility. Make sure you call them the "meteorologist" or weather reporter, or illustrator, data tracker, etc. so that they begin to hear the language of college and career.*

Create an Excel Spreadsheet/graph to record observations and data

Use Science Notebook to record observations and data

Use Science Notebook to draw daily observations

- **Note-booking skills and procedures**

Day 1 have to teach the students how you want the notebook. Provide an exemplar to show them or to refer back to

- **How clouds are created**

- **What months are identified with different seasons**

Demonstrate/review/model calendar or graphing skills and then release to students

- **How to create models to demonstrate severe weather conditions**

Use design process to design and to construct a model

## Documenting Student Progress

- **Anecdotal Notes Templates**

#1--<https://www.pinterest.com/pin/626141154413062241/> (good for personalized learning)

#2-[blank anecdotal recording templates](#)

- **Observation Forms/Progress Monitoring**

#1-<http://happydayhomeschooling.blogspot.com/2012/03/whats-weather.html>

- **Conferencing Templates**

#1- <https://betterlesson.com/lesson/resource/3104310/guiding-questions-for-what-is-weather-with-room-for-anecdotal-notes>

- **Note-booking/recording weather Tools**

#1-[http://www.vinotique.com/post\\_my-daily-weather-chart\\_391052/](http://www.vinotique.com/post_my-daily-weather-chart_391052/) ((Thermometer Template)

#2[https://images.search.yahoo.com/search/images;\\_ylt=AwrE1xiINPtabwUApBtXNyoA;\\_ylu=X3oDMTEyNWNiaW4yBGNvbG8DYmYxBHBvcwMxBHZ0aWQDQjI5NDRfMQRzZWMDc2M-?p=free+2nd+grade+weather+journals&fr=mcafee#id=2&iurl=https%3A%2F%2Fs-media-cache-ak0.pinimg.com%2F236x%2Fbb%2F86%2Fa6%2Fbb86a6268b4e7ed27184a220afdc9ad6.jpg&action=close](https://images.search.yahoo.com/search/images;_ylt=AwrE1xiINPtabwUApBtXNyoA;_ylu=X3oDMTEyNWNiaW4yBGNvbG8DYmYxBHBvcwMxBHZ0aWQDQjI5NDRfMQRzZWMDc2M-?p=free+2nd+grade+weather+journals&fr=mcafee#id=2&iurl=https%3A%2F%2Fs-media-cache-ak0.pinimg.com%2F236x%2Fbb%2F86%2Fa6%2Fbb86a6268b4e7ed27184a220afdc9ad6.jpg&action=close) (Loads of templates)

- **Rubric Templates/Tools**

#1-Rubistar (<http://rubistar.4teachers.org/index.php> )

- **Rtl Tools**

#1 <http://theinspiredapple.net/2015/10/rti-for-kindergarten-first-grade-second.html>

- **Collaboration Tools**

- **Project-Based Unit Lessons-Weather**

<http://www2.davidson.k12.nc.us/pbl/eett/pblfiles/varner/PBL-weather.pdf>

- **Design Process Tools/Templates**

#1-<https://www.pinterest.com/pin/190066046750624755/> (can recreate and use for an assessment tool with making a model of something)

#2-[http://iportalpilot.weebly.com/uploads/5/4/2/5/5425277/engineering\\_design\\_process\\_portfolio\\_rubric.pdf](http://iportalpilot.weebly.com/uploads/5/4/2/5/5425277/engineering_design_process_portfolio_rubric.pdf)

#3-[http://pbskids.org/designsquad/pdf/parentseducators/workshop/designprocess\\_in\\_action.pdf](http://pbskids.org/designsquad/pdf/parentseducators/workshop/designprocess_in_action.pdf)

(There are great questions to ask about each stage—good for conferencing information to assess understanding)

- **Electronic Tools and Games**

[www.nearpod.com](http://www.nearpod.com)

(Drawing section)

- [www.kahoot.com](http://www.kahoot.com)

Fun way to assess learning

- **Jeopardy Templates**

Fun way to integrate math too!

<https://jeopardylabs.com/play/2nd-grade-weather-review-13>

<http://www.superteachertools.us/jeopardyx/>

- Seesaw (Electronic portfolio)

[https://web.seesaw.me/homepagetest?utm\\_expid=.CU4Jeij3QpiavjBMfmQHOG.1&utm\\_referrer=](https://web.seesaw.me/homepagetest?utm_expid=.CU4Jeij3QpiavjBMfmQHOG.1&utm_referrer=)

- [www.socrative.com](http://www.socrative.com)

Great for exit slips and quizzes

- **Weather Games**

<http://www.cotf.edu/ete/modules/k4/online/wonline1.html>

<https://www.learninggamesforkids.com/?s=weather>

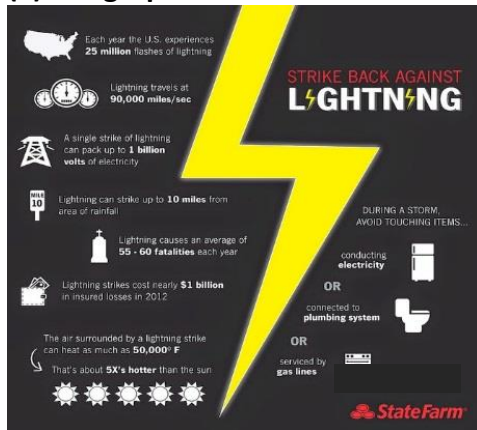
- **Weather Folder Game**

<https://filefolderfun.com/?s=second+grade+weather+game>

## Additional Examples of Progress Monitoring/Assessment Tools

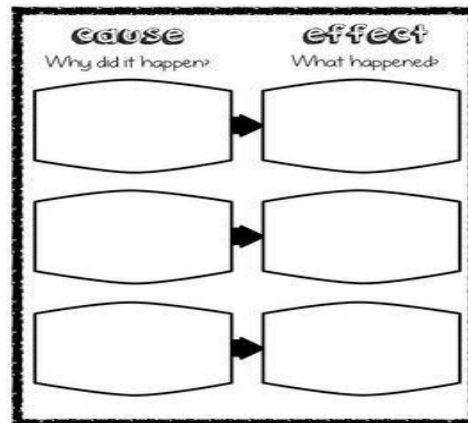
- (1) Additional Assessment/Progress Monitoring Activities/Tools/Templates  
Using a teacher-created chart of weather data including temperature and weather conditions, students will predict the temperature and weather for three days.
- (2) Create a storm safety poster that describes the dangers of the storm and what safety measures need to be taken.  
[www.easel.ly.com](http://www.easel.ly.com) (Infographic Maker)
- (3) Have students predict the impact on moving air (wind) on various objects by drawing models and/or making written predictions. Use the graphic organizer below to record impacts of moving air and draw the effects of the air inside the appropriate boxes.
- (4) Create a class weather blog in Padlet [www.padlet.com](http://www.padlet.com) and let kids draw and make comments and predictions.

### (2) Infographic Maker



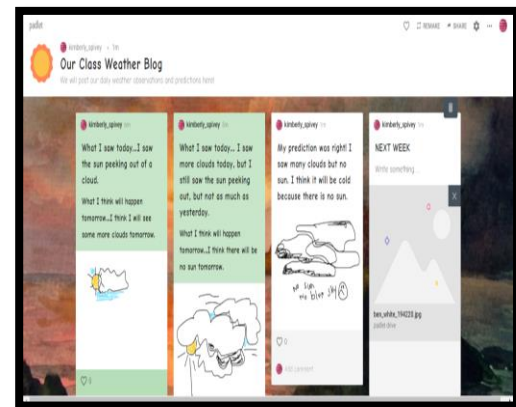
[www.easel.ly.com](http://www.easel.ly.com)

### (3) Graphic Organizer



"Cause and Effect" Google Images

### (4) Padlet Weather Blog: pisfiawq591y



[www.padlet.com](http://www.padlet.com)