

## Characteristics of the Weather

**Overview:** Whether good or bad, we all have to withstand weather. This activity provides the students an opportunity to learn the characteristics of various weather patterns, what they need to endure the weather, and allows them to share their favorite type of weather.

### Procedure:

- 1) List the various types of weather phenomena and their characteristics. For example: Sunny= no clouds, warmth, etc. Snowy= clouds, precipitation, cold, etc.
- 2) List the things you need to prepare for each type of weather. For example: Sunny= sunblock, sunglasses, etc. Hurricane= shelter, candles, batteries, etc.
- 3) Write about your favorite type of weather, what you would need, and why. For example: I like hot sunny days because I can go to the beach. I need sunglasses, sunblock, and swim shorts.
- 5) Students will create weather in a cup.  
<http://www.teacherspayteachers.com/Product/Weather-In-A-Cup-Water-Cycle-205976>
- 6) Make it rain in a jar  
[http://www.icanteachmychild.com/making-it-rain/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed:+icanteachmychild/Hjwa+I+can+teach+my+child!](http://www.icanteachmychild.com/making-it-rain/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+icanteachmychild/Hjwa+I+can+teach+my+child!)
- 4) Share with the class.

### ASOLs Covered in this Activity:

#### **SCIENCE**

- 3S-ESS 1:** The student will investigate and understand basic types, changes, and patterns of weather. Key concepts include
- a) identification of common storms and other weather phenomena;
  - b) the uses and importance of measuring, recording, and interpreting weather data;
  - c) the uses and importance of tracking weather data over time.
- 3S-ESS 5:** The student will investigate and understand the water cycle and its relationship to life on Earth. Key concepts include
- b) the energy from the sun drives the water cycle;
  - c) the water cycle involves several processes;
- 5S-ESS 1:** The student will investigate and understand how weather conditions and phenomena occur and can be predicted. Key concepts include
- a) weather phenomena;
  - b) weather measurements and meteorological tools;
  - c) use of weather measurements and weather phenomena to make weather predictions.
- 8S-ESS 2** The student will investigate and understand the role of solar energy in driving most natural processes within the atmosphere, the hydrosphere, and on Earth's surface. Key concepts include
- d) cloud formation;

e) the role of thermal energy in weather-related phenomena including thunderstorms and hurricanes.

**8S-ESS 4:** The student will investigate and understand the properties of air and the structure and dynamics of Earth's atmosphere. Key concepts include

- b) pressure, temperature, and humidity;
- c) atmospheric changes with altitude;
- e) the relationship of atmospheric measures and weather conditions;
- f) basic information from weather maps including fronts, systems, and basic measurements.

**HSS-ESS 3:** The student will investigate and understand that energy transfer between the sun and Earth and its atmosphere drives weather and climate on Earth. Key concepts include

- a) observation and collection of weather data;
- b) prediction of weather patterns;
- c) severe weather occurrences, such as tornadoes, hurricanes, and major storms;
- d) weather phenomena and the factors that affect climate including radiation, conduction, and convection.

**Extension Idea:**

Conduct further investigations into weather phenomena by learning how predictions are made; the tools used, and the conditions required to produce the weather patterns.

**READING & WRITING**

- 3E-RW 2:** The student will
- a) use newly acquired vocabulary drawn from reading and other content areas.
  - b) demonstrate understanding of the meaning of newly acquired vocabulary.
- 3E-CN 1:** The student will
- g) sequence at least two steps in a procedure or ideas/incidents in an event.
- 3E-CN 2:** The student will
- c) demonstrate an understanding of nonfiction text by connecting a visual element.
- 4E-RW 1:** The student will
- c) use newly acquired vocabulary drawn from reading and other content areas.
- 5E-RW 1:** The student will
- f) demonstrate understanding of content-specific words.
- 5E-WP 1:** The student will
- a) select a topic and use drawing, dictating, or writing to compose a message with one fact about the topic;
  - b) select an event or personal experience and use drawing, writing, or dictating to compose a message about it;
  - c) add more information to own drawing, dictating, or writing to strengthen the message.
- 5E-WP 2:** The student will

- a) use technology (including assistive technologies) to produce and publish writing;
- b) write information related to personal experiences and answer simple questions about those experiences.

**5E-WP 3:** The student will

- b) select a topic and write about it including one fact or detail;
- c) select an event or personal experience and write one thing about it;
- d) revise own writing by adding more information.

**5E-WP 4:** The student will

- b) use spelling rules when writing by capitalizing the first letter of familiar names.

**5E-WP 6:** The student will

- a) use technology to produce and share writing;

**5E-WP 7:** The student will

- a) write to convey ideas and information clearly by selecting a topic using related visual, factual, or multimedia information;
- b) write to convey ideas and information by selecting a topic and listing words, facts, or details related to the topic;
- c) produce writing that expresses more than one idea with a logical organization;
- d) plan by brainstorming and revise own writing by adding more information;
- e) use technology, including the Internet, to produce writing.

**6E-CN 1:** The student will

- c) use content words and phrases from nonfiction text.

**7E-CN 1:** The student will

- e) use content words and phrases from a nonfiction text.

**8E-RW 1:** The student will

- e) acquire and use content words and phrases.

**8E-WP 1:** The student will

- a) write to convey ideas and information including facts, details, and other information.
- c) plan by brainstorming and revise own writing by adding more information;
- d) use content specific vocabulary when writing about a topic.

**8E-WP 3:** The student will

- b) write to convey ideas and information including facts, details, and other information as well as graphics and multimedia as needed.

**8E-WP 5:** The student will

- b) write to convey ideas and information clearly including facts, details, and other information.
- c) produce writing that is appropriate for the task, purpose, or audience;

**HSE-WP 1:** The student will

- b) write to convey ideas and information using clear organization and including facts, details, and other information as well as graphics and multimedia as needed.
- c) The student will write about an event or personal experience by introducing the event or experience, at least one character, and describing multiple events in sequence.

**HSE-RW 2:** The student will

- c) acquire and use content words and phrases.

**Extension Idea:**

Create an emergency action plan so the students can share information about what to do in case of severe weather with their families. Particular attention may be given to content words and sequence of events. Encourage students to include illustrations, tables, graphs, and digital photographs to act as visual aids. Texts might take the form of a PowerPoint presentation, book, journal entry, newsletter, or blog. Students can post their action plans in their homes.

**MATH**

**3M-PSPFA 1:** The student will

- a) create picture graphs from collected measurement data;
- b) use picture or bar graph data to answer questions;
- c) insert data into a preconstructed bar graph template;
- d) interpret data from a variety of graphs to answer questions.

**4M-NSCE 1** The student will

- a) compare numbers to each other based on place value groups by composing and decomposing to 50;
- b) compare whole numbers (<, >, =);

**5M-PSPFA 1** The student will

- a) compare two sets of data within a single data display such as a picture graph, line plot, or bar graph;
- b) represent and interpret data on a picture, line plot, or bar graph given a model and a graph to complete.

**6M-NSCE 1** The student will

- a) demonstrate a simple ratio relationship.

**6M-PSPFA 1** The student will

- a) display data on a graph or table that shows variability in the data;
- b) summarize data distributions on a graph or table;
- c) answer a question related to the collected data from an experiment, given a model of data, or from data collected by the student.

**7M-NSCE 3** The student will

- a) use a ratio to model or describe a relationship;

**HSM-FS 2** The student will

- a) indicate general trends on a graph or chart.

**HSM-FS 3** The student will

- a) given data, construct a simple graph (table, line, pie, bar, or picture) and answer questions about the data.

**Extension Idea:**

Keep track of the weather during the school year, record data, and display the data visually. Are there any patterns? Compare your data to previous years and discuss.

**Materials Needed:**

- writing utensils
- paper

- computer
- jars, cups
- water
- weather pictures

**Instructional Setting:**

This activity can be done in the special education or general education classroom.

**Community Connections and/or Peer Interaction:**

Students can work together, in small groups, or independently.  
Have a local meteorologist come in and talk to the students.

**Functional Activity/Routine:**

This activity encourages functional skills such as teamwork, following instructions, dictating instructions, observing natural occurrences, and critical thinking. This activity also informs the student about changes in weather and how to be prepared for those changes.

**Strategies to Collect Evidence:**

The student's chart listing the various weather phenomenon and their characteristics provides a work product.

**Specific Options for Differentiating this Activity:**

- Prepare, as necessary, for each student to make choices and communicate with their preferred method. This may include using augmentative communication.
- Adjust the activities difficulty based on your students' ability.
- Students with varying skills can be assigned jobs to do based on their needs or skill level.
- Partner with a general education buddy to complete the steps.