

Lesson/Unit Description
Weather Unit

Name(s): Lisa Gowman

School(s): Belmont Hills

Curricular Area(s)/Course(s): Science, Math, Language Arts, Social Studies.
Technology

Grade(s): 2

Academic Standard(s):

I. *Science Objectives*

- A. Students will understand there are various forces in nature that interact to create changes in our weather.
- B. Students will be able to gather, interpret, and record data about the weather using various resources.
- C. Students will use various weather terms when writing a weather forecast.
- D. Students will create a weather instrument that can be used to help predict the weather.

II. *Social Studies Objectives*

- A. Students will be able to locate places on maps and globes.
- B. Students will be able to use direction words (N,S,E,W) to describe the weather.

III. *Language Arts Objectives*

- A. Students will respond to the books Cloudy With A Chance Of Meatballs and Pickles To Pittsburgh by writing their own weather forecast.
- B. Students will use the writing process to write their own weather forecast.
- C. Students will understand that communication takes different forms, each with its own elements.
- D. Students will present their weather forecast to the class and for videotaping.

IV. *Math Objectives*

- A. Students will compare numbers when recording temperatures in various places.
- B. Students will create and interpret graphs using the data collected about the weather.

IV. *Technology Objectives*

- A. demonstrate a sound understanding of the nature and operation of technology systems. (Standard 1)
- B. develop positive attitudes toward technology...collaboration. (Standard 2)
- C. use technology tools to enhance learning and increase productivity.
Students use productivity tools to collaborate in constructing technology-enhanced models... (Standard 3)

Benchmark(s):

I. *Technology Benchmarks*

- A. use a variety of media and technology resources for directed and independent learning activities.
- B. use a variety of media and tech resources for directed and independent learning activities
- C. use developmentally appropriate multimedia resources to support learning.
- D. work cooperatively and collaboratively with others when using technology
- E. demonstrate positive social and ethical behaviors when using technology equipment.
- F. practice responsible use of technology systems and software
- G. use a variety of media and tech resources for directed and independent learning activities
- H. use tech resources for problem solving, communication, etc..

Essential Questions:

What is weather?

How does weather occur?

How do weather events influence/effect our daily lives?

How does the weather around us differ from the weather in various places?

How does weather forecasting help us to react to weather events?

Assessment(s):

- A. Students will use the data collected from the Internet to chart and compare the weather both in our area and in Paris over time.
- B. After reading various weather books, students will write and present their own weather forecast including accurate direction words, locations and weather terms.

Content (What the students will Know, Do, Understand)

aka Tasks (UOP):

Students will:

- A. use and control a mouse, track pad or other pointer device to move pointer on screen
- B. identify keyboard, mouse, screen, printer, media
- C. turn computer and other appropriate devices on/off
- D. locate and access computer directories
- E. launch and quit applications and documents
- F. demonstrate initial search strategies for finding information
- G. show respect for privacy of individual passwords
- H. demonstrate compliance with Acceptable Use Policy
- I. share ideas and practices with others
- J. share resources through collaboration
- K. show responsibility for privacy/ownership of files
- L. acknowledge/recognize the work of others.
- M. show respect for privacy of individual passwords
- N. demonstrate compliance with Acceptable Use Policy
- O. demonstrate proper care of equipment, software, etc..
- P. utilize word processing
- Q. utilize web browser
- R. utilize word processing
- S. utilize web browser

Instructional Strategies

include specific Invitations, Situations, Interactions (UOP): This unit developed as part of a weather unit.

A spreadsheet was developed to organize weather data that the students collected off the internet. To introduce the spreadsheet, I printed it out and asked each student to fill in the information as they found it on the Internet. Students went to <http://www.weather.com> and recorded the current temperature, the high and low and the predicted forecast for tomorrow. (A weather page is now available on the 2nd grade's Tech Menu page.) They also found the temperature in Paris.

Once all students had recorded the information, we recorded it as a group onto one spreadsheet. We went into the computer lab and students recorded the data for the next two days. Each day we updated the spreadsheet. The following week, the students took turns working with a group to find the

information on the Internet and present it to the class. Each student will have an opportunity to be the meteorologist who updates the spreadsheet. We saved it everyday onto our class shared folder. After a few weeks of getting comfortable with the process, a daily student weather report was included in the morning announcements on the PA system.

The second project that we did as part of our weather unit ties into Language Arts. After reading the book, Cloudy With A Chance Of Meatballs students wrote a weather forecast for breakfast, lunch or dinner. They were so excited about the writing and had done such a nice job that I decided to publish them and display them in the hall. Students used AppleWorks to type in their forecast. They printed out two copies of the document. One to hang in the hall and the other they printed in a larger font. The larger font was used by students as a prompt because students were videotaped presenting their report. Students learned how to highlight text and change size and font. They also learned how to change the page setup to landscape. During videotaping students used a map to locate the places that they were reporting on. After videotaping, iMovie was used to edit the tape.

As a follow up, we read the book Pickles To Pittsburgh and students used maps and globes to list foods and locations. We made posters with transportation drawings such as Marshmallows to Maine and Candy to China.

A third project used the Internet to research the types of instruments weather forecasters use to predict the weather. Students researched the types of instruments and discussing their uses. Students used time and materials at home to create a functional weather instrument such as a barometer or weather vane. After returning to school with the instrument, students worked in small groups to create a script that explained how the instrument worked and how it helped to predict the weather. The groups then shared their instruments and information during a videotaped presentation. iMovie was then used to edit the recording.

Resources aka Tools (UOP):

- A. Meteorologist report spreadsheet
- B. Internet access
- C. Blank Meteorologist report spreadsheet copies for each student
- D. AppleWorks program
- E. printer
- F. video camera

G. iMovie program

H. books Cloudy With A Chance Of Meatballs and Pickles to Pittsburgh

Connections, Adaptations, & Extensions:

This unit can extend to all areas of the curriculum. Weather instruments can be made in the classroom to go along with weather forecasting. To illustrate their weather forecast, students can use a draw program or import graphics.