

Weather Unit - DLM Weather Unit with added Storm activities

Utica Universal Pre-K

This unit contains lesson plans and ideas from the DLM weather curriculum unit, and the following web pages:

Enchanted Learning.com

www.childcareland.com

Essential Questions:

What are some types of weather and weather patterns?

How does weather affect people and regions?

What are some storms that influence and change the weather?

Theme Objectives based on NYS Learning Standards:

ELA - The students will...

- *begin to engage in conversation and follow conversational rules.
- *ask questions related to the current topic.
- *compare and contrast different text forms.
- *listen for different purposes.

Science - The students will...

- *use one or more senses to observe and learn about objects, events and organisms
- *describe observations
- *investigate unfamiliar objects, organisms, and phenomena

Social Studies - The students will...

- *begin to understand cause and effect relationships
- *begin to share and cooperate with others in group activities
- *recognize meteorology as a career and state what meteorologists do in their roles

Math – The students will...

*continue to develop patterning skills

*continue to demonstrate number sense

*sort by size, shape, etc.

Resources Used:

DLM

Enchanted Learning.com

<http://www.canteach.ca/elementary/songspoems22.html>

www.weatherwizkids.com

www.easyfunschool.com

Literature:

Cloudy with a Chance of Meatballs by Judi Barrett

Before the Storm by Jane Yolen

The Cloud Book by Tomie DePaola

Flash, Crash Rumble and Roll by Franklyn Branley

Kippers Rainy Day by Mick Inkpen

Kippers Sunny Day by Mick Inkpen

It's Too Windy by Hans Wilhelm

What will the weather be like today? By Paul Rogers

Weather Words and What they Mean by Gail Gibbons

The Wind Blew by Pat Hutchins

The Magic School Bus Kicks Up a Storm by Joanna Cole

The Magic School Bus Lost in the Snow by Joanna Cole

Storms by Susan Canizares and Betsey Chessen

What's the Weather Today? By Allan Fowler

Who Cares About the Weather? By Melvin Berger and Natalie Lunis

Thunderstorms by Jim Mazzanote

Thunder Boomer by Shutta Crum

Like a hundred drums by Griessman, Annette.

Franklin and the Thunderstorm by Bourgeois, Paulette.

Stormy Day by Henley, Claire

Thunderstorm by Szilagyi, Mary

Suggested Centers for the Week

1. Science

Objective: The student will be able to:

Identify and describe pictures and photographs and define each in a season or weather type.

Create a chart of objects found in different weather cycles.

Materials:

Magazines, glue, scissors, paper, crayons

Develop: The student will look through magazines to find pictures of things that represent weather or seasons. The student will cut out the pictures and glue them on paper to create a chart. The student will record their name on the back of their paper.

Reflect/Assess:

What are the differences between winter, spring, summer and fall?

What are the differences between areas of heat and cold?

2. Dramatic Play Center

Objective: The student will be able to:

Identify objects and clothes and which season they fit into.

Sort objects into groups by an attribute and begin to explain how the grouping was done

To begin to engage in dramatic play with others.

Materials:

Clothing from different seasons/weather types, mirror, and large chart

Focus:

The students will have access to clothing from various types of weather. Encourage the children to sort the clothing by season, then by types of weather. Have the students describe the storms that the clothing would be most appropriate for. Have students describe the clothing by weight and material type. Allow children to observe selves in mirror with clothing.

Reflect/Assess: What would you wear if it were cold/hot/raining/snowing/freezing?

3. Art

Objective: The student will...

Use different colors, surface textures and shapes to create form and meaning to create artwork that reflects different weather and season types.

Materials:

Paint, spray bottles, paper, crayons, markers, pencils

Focus:

Give the students a variety of materials to create weather pictures and paintings. Provide paint, stencils, cotton, and tissue paper and encourage students to design and create weather pictures.

Reflect/Assess: What type of material did you use to show snow/rain/sun?

4. Writing – Storm Word Cards

Objective: The student will...

*correctly match letters in a word given magnet letters and words cards (or dry erase boards and word cards).

Materials:

Magnetic letters, word cards, dry erase boards, markers, writing utensils, paper

Develop:

Give students magnetic letter and word cards with different storms or weather names. Have students match the letters on the word card with the magnetic letters. Allow

them time to record words on their own paper or dry erase paper too. Add words as the unit changes and encourage students to ask for new words as they learn them.

Reflect/Assess:

What is weather? What are different storms?

Day 1 – Introduction to Weather

Literacy Objectives: The students will...

begin to engage in conversation and follow conversational rules.

Identify weather and weather patterns

Create a word web of weather conditions and storms

Literacy Vocabulary:

Weather, storms, climate

Focus Literacy Activity:

*Sing “The Weather Song”. Ask the children which kind of weather is their favorite.

*Explain to the students that this week we will be discussing different kinds of weather, weather patterns and storms.

Develop Literacy Activity:

*Ask students to go to the window and describe the weather. If weather permits, take a nature walk and discuss the weather. Ask students to describe activities that they enjoy or do during this weather pattern.

*Show students real photographs of different weather conditions and ask the students to describe each condition.

*Make a weather word web. Ask the children to describe what they know about different weather conditions.

Practice Literacy Activity:

*Have students match uppercase and lowercase letters on different weather cards (sun cards, cloud cards, snowflake cards).

*Give students paint and paper and encourage them to paint different weather scenes and describe their paintings.

*Place a variety of clothing in the dramatic play area and allow children the opportunity to dress for different weather.

Reflect/Assess:

Ask: How would we change our clothes for different weather?

What different sounds do you hear with the weather?

Literacy Circle:

Storytime 1:

Present the "Sing Me a Rainbow" flannel board and discuss the vocabulary in this story.

Storytime 2:

Read and have the students act out the action story of "Weather". Ask the children to recall and describe words that discuss weather.

Letter Knowledge:

Present the letter W for weather. Have students use cotton to cover the letter and create "snow."

Second Language Learners:

Have ESL students review and identify weather using real photographs. While on the nature walk, show and describe to ESL learners different objects and clothing pertaining to different seasons.

Music/Movement:

*Cut out large raindrop out of construction paper. Have students jump from raindrop to raindrop singing a rain song. To encourage number or letter knowledge, write letters or numbers on the drops and have children jump in ABC or number order.

Materials:

-books and flannel boards about weather conditions

photographs of weather

-chart paper

raindrop construction paper

-crayons, pencils, markers

cotton balls

Content Connection -Science

Objectives: The student will use simple measuring devices to learn about objects and organisms.

Vocabulary: thermometer, temperature

Materials: cups of cold and hot water, crushed ice, cereal box, plastic zipper bag, salt, thermometer, two pencils

Activity:

- *Display a thermometer to the students and ask if anyone knows what this is.
- *Describe that a thermometer is a device people use to measure the temperature. Explain that temperature measures how hot or cold something is.
- *Tell them that they are going to perform an experiment using the thermometer.
- *Place a cup of cold water and a cup of hot water on the table. Place the thermometer in the cold water first and point out that the mercury does not rise. Then place the thermometer in the hot water and have the children watch the mercury rise.

Activity 2

Place crushed ice with one teaspoon of salt into a plastic zipper bag. Punch a hole in the bottom of an oatmeal box so you can slip a thermometer up into the box. Note the temperature of the air in the box. Place two pencils across the top of the oatmeal box and place the bag of ice on the pencils so that the bag sits in top of the open end of the box. Wait fifteen minutes. Now read the temperature again. Is it cooler inside the box? Warm air rises and cool air is heavy, so even though the ice is not in the box, cooled air should sink down into the box.

Day 2 – Clouds

Literacy Objectives: The student will be able to...

- *identify and describe the three types of clouds.
- *recall how clouds impact and influence different patterns of weather.

Literacy Vocabulary:

Clouds, stratus, cumulus, cirrus

Focus Literacy Activity:

- *Remind students of the weather web created on the previous day.
- *Explain that today we will be learning about something in the sky that impacts and changes the weather. Display a photograph of a cloud.

Develop Literacy Activity:

- *Read the book, *The Little Cloud* by Eric Carle.
- *On chart paper, display photographs of the three kinds of cloud types. Have students describe what they see in each cloud type.
- *Record their descriptions next to the photographs (ask the students to use good descriptive language and vocabulary at this time).

Practice Literacy Activities:

- *Place books about clouds in the reading and listening center. Encourage the students to create their own stories about clouds.
- *Place cotton balls in the sensory tub unit and encourage students to measure, sort, pour, etc.
- *Pour shaving cream on table and have students make different cloud type pictures. Remind students about the spilt milk book and have them create pictures in their clouds.
- *Make white puffy paint and allow students the opportunity to create cumulus clouds.

Literacy Activity:

Storytime 1: The teacher will read *Cloudy with a Chance of Meatballs*. When complete, ask the students if this book is real or make-believe. Have the students create a list of objects that fall from the sky. Compare this list with the book.

Storytime 2: Read *It Looked Like Spilt Milk*. Before you read the book, bring a tray with a small carton of milk to the circle. While talking with the students, accidentally spill the milk. Ask the students to describe what they see in the milk. Have students draw what they think the milk looks like. Read the story. – If weather permits, take the students outside and have them lay down. Discuss how the clouds change and what they see when they look in the sky.

Letter Knowledge: C is for Clouds

Create cloud cutouts with different letters on them (make sure there are 5-6 C cutouts) and ask students to jump from one "C" cloud to the other "C" cloud.

Second Language Learners

Music/Movement: Choose a song to teach and sing with the students about clouds:

Clouds are Floating

(to the tune of Frere Jacques)

Clouds are floating, clouds are floating,
Up so high, up so high,
Floating up above us, floating up above us,
In the sky, in the sky.

Clouds

What's fluffy, white, and floats up high,
Like piles of ice cream in the sky?
And when the wind blows hard and strong,
What brings the rain?
What brings the snow?
That showers down on us below?

Materials for Day 2:

Books – The Cloud Book, Cloudy with a Chance of Meatballs, The Little Cloud, It Looked Like Spilt Milk

Milk and tray paper writing utensils teacher made cloud
cutouts

Chart paper photographs of the three cloud types

Content Connection – Math

Cloud Graph

Objective: The student will select and describe their favorite type of cloud.

The student will use cotton to create their cloud and graph on large chart paper.

The student will identify most favorite and least favorite clouds accurately.

Vocabulary: cloud types – stratus, cirrus, cumulus, most, least

Materials: photographs of three cloud types, cotton balls, tape

Activity 1: Review the three types of clouds with the students. Display photographs of each type.

Give each child a cotton ball and ask them to create their favorite cloud type (spread out, fat and thick or small strands). Have them identify the name of the cloud type (or if cannot recall vocabulary, have students point to the photograph of the cloud they have chosen).

Activity 2:

When clouds have been completed, have the students come to a large graph and tape to the cloud type they have chosen (place photographs on bottom of chart to assist in selection).

When all have been placed on graph, count and identify most and least favorites of the cloud types.

Content Connection – Fine Arts

Literacy Objective: The student will create a painting that depicts clouds in the sky.

The student will follow simple directions to complete a project.

Vocabulary: clouds, diluted

Materials: white crayons, white paper, diluted blue paint, paintbrush

Activity: Have the students draw clouds on white paper using white crayons. Ask them what has happened to their work? Encourage the children to guess how they can bring their clouds to light. Pass out the diluted blue paint and paintbrush. Have the students paint over their work and watch as the clouds appear in their picture.

Day 3 – Thunderstorms/Blizzards

Literacy Objectives: The student will be able to...

- *identify and describe a thunderstorm and blizzard
- *identify characteristics of a thunderstorm and blizzard
- *recall and describe safety activities in case of a thunderstorm or blizzard

Literacy Vocabulary:

Thunderstorm, blizzard, safety

Focus Activity:

- *Review the weather web created on day one.
- *Tell the students that we will be learning about two storms that effect weather – thunderstorms and blizzards.

Develop Activity:

- *show the students a photograph of a storm – thunderstorm and blizzard.
- *Describe characteristics of both storms. Create a T-chart to compare and contrast what makes a thunderstorm and a blizzard.
- *Explain how both storms can be dangerous and review safety procedures during both storms.

Practice Literacy Activity:

- *Have the students use paint or other writing utensils to create a picture that reflects a thunderstorm or blizzard – may wish to use spray bottles to reflect rain or salt for snow.
- *Have students cooperatively work together to put together storm puzzles and describe/define the storm in each puzzle.
- *Have the students create their own rainbow. Supply the class with a white sheet of paper, a glass of water and the sun. Demonstrate and then allow children to do on their own – place the glass of water (filled) on the corner of the table. Make sure that the table is near a window and that the sun shines through the glass. Place the white sheet of paper on the floor. Move paper until rainbow shows on the paper. Have

students describe what has happened and use the rainbow to draw and create one of their own.

Reflect/Assess:

What happens during a thunderstorm?

Why are thunderstorms and blizzards dangerous?

Literacy Circle:

Storytime 1:

The teacher will read *Flash, Crash Rumble and Roll*. When complete have the students listen to a CD of a thunderstorm. Ask the students to describe and recall different sounds and feelings when listening to the storm.

Storytime 2:

The teacher will read *Stormy Day* by Claire Henley. When complete, ask students to recall all of the things they see when they watch a thunderstorm pass.

Letter Knowledge:

B is for blizzard. Have students record the letter B on paper and using salt or cotton to cover the letter to represent snow.

Second Language Learners:

Give ELL students a diagram of a home. Pass out raindrop felt pieces or snow felt pieces. Have students listen and practice prepositional phrases with the pieces (ie snow is falling on the roof or next to the garage).

Music/Movement:

Sing the following song and have the students use finger and body motions to act out:

Rain

When the rain comes down drip drop drip drop,
(flutter fingers down in front of you)
Windshield wipers flip flop flip flop,
(bend arms in front and move them side to side)
Boots in puddles plip plop plip plop,
(move feet up and down)

I wish the rain would never stop.
Drip drop drip, (use motions as you say it)
Flip flop flip, ("")
Plip plop plip plop, ("")
PLOP! (do the motions and jump)

Materials for Day 3:

- books – Flash, Crash, Rumble and Roll and Stormy Day
- photographs of thunderstorms/blizzards
- thunderstorm CD -chart paper -markers

Content Connection – Science – Make it Rain

Objective: The students will identify the process of rain and the water cycle.

Vocabulary: rain,

Materials: glass jar, plate, hot water, ice cubes and index cards

Activity: Pour about two inches of very hot water into the jar. Cover the jar with the plate and wait for a few minutes. Put the ice cube on the plate and watch what happens.

Explanation - The cold plate causes the moisture in the warm air, which is inside the jar to condense and form water droplets. This is the same thing that happens in the atmosphere. Warm, moist air rises and meets colder air high in the atmosphere. The water vapor condenses and forms precipitation that falls to the ground. – This is why it rains.

Content Connection – Making Thunder – Social Studies/Literacy

Objective: The students will act out and follow the process of a thunderstorm.

The student will work cooperatively with peers to follow process of a storm.

Vocabulary: thunder, lightning, rain

Materials: baking sheet, flashlight, maracas, chart, crayons

Activity: Give students different materials. Following the procedure of a real thunderstorm, have students begin by making rain noises, then flash of light for

lightning and boom for thunder. Pass the different materials around and allow the students to take turns making thunderstorms and describing the procedure.

Day 4 – Tornadoes

Literacy Objectives: The students will be able to...

- *listen and describe how a tornado works
- *look at photographs of tornadoes
- *learn and recall basic safety tips during a tornado
- *create a simulated tornado in a bottle

Literacy Vocabulary:

Tornado, twister, safety

Focus Literacy Activity:

- *The teacher will read *Twister* by Darleen Bailey Beard.
- *Following the book, the students will create a chart that describes a tornado.
- *The students will describe what happens during a tornado.
- *The student will label and describe actions that people should take when a tornado hits an area. The teacher will chart the actions. The students will compare these safety actions with the actions used during a thunderstorm.

Practice Literacy Activities:

- *Have the students create a tornado in the water table with funnels.
- *Create a twister craft. Supply students with paper and crayons. Have the students cut thin strips of paper and have students color them. Twist the paper and glue on construction paper. Design the paper to look like a tornado.
- *Have students use play dough to create tornadoes and then draw the tornado creation they have made.
- *In the dramatic play area, encourage students to act out and recall ways to stay safe in a storm or tornado.

Reflect/Assess:

What happens during a tornado?

Why are tornadoes so dangerous? How are tornadoes and thunderstorms alike? How are tornadoes and thunderstorms different?

Literacy Circle:

Storytime 1:

The teacher will read *A Twisted Tale* by Carolyn Fisher. The students will talk about if the story is real or make believe. Encourage the students to think of some other animals or things that may become mixed up during a tornado or twister.

Storytime 2:

The teacher will read *The Bravest of Us All* by Marsha Diane Arnold. The students will discuss how each sibling has shown bravery in the story.

Letter Knowledge:

T is for tornado and twister. Use pipe cleaners to “twist” the letter t.

Second Language Learners:

Have ELL students act out the process of a twister. Find a video or website that demonstrates a real tornado and allow ELL students to watch and then act out and describe the actions during the tornado.

Music/Movement:

While playing music that depicts a thunderstorm, encourage the students to spin and twist and turn like a tornado, then stop the music and have the students stop their twisting.

Materials for Day 4:

-books – Twister, A Twisted Tale, The Bravest of Us All

-chart

-markers

-soda bottles

-duct tape

-glitter/food coloring

-water

Content Connection – Social Studies/Dramatic Play

Objective: The students will identify the role and career of a meteorologist.

Vocabulary: meteorology

Materials: green screen (green construction paper), pointer, map, cotton balls, water, etc

Activity 1: Bring in a tape of a meteorologist from the weather news. Have the students watch how the meteorologist acts and the job that they do. Supply the house area with a green screen and pointers and allow students to take turns pretending to tell the weather. Encourage the students to pretend to review weather models and data before offering the weather on the news.

Activity 2: Invite a meteorologist to the classroom for the day. Ask the students to come up with questions to ask the meteorologist and ask the meteorologist to come in and talk about their job and their responsibilities with the students.

Content Connection – Science

Objective: The students will create a tornado in a bottle.

The student will be able to describe what is happening to the tornado.

Vocabulary: tornado, model

Materials: 2 soda bottles, duct tape, water

Activity: Fill one of the bottles 2/3rds with water. Place tape on the first bottle and attach the two bottles together. Make sure that the tape is on properly and there are no holes. Turn the bottles so that the bottle with the water is on top. Swirl the bottle and watch how the water appears as a tornado. You can also use glitter or food coloring to make the tornado more clearly prominent. Describe how the circle motion makes a "vortex" which creates the tornado.

Day 5 – Hurricanes

Literacy Objectives: The students will be able to...

- *listen and describe how a hurricane works
- *look at photographs of hurricanes
- *learn and recall basic safety tips during a hurricane

Literacy Vocabulary:

hurricane, safety

Focus Literacy Activity:

- *The teacher will read *Sergio and the Hurricane* by Alexandra Wallner.
- *Following the book, the students will create a chart that describes a hurricane.
- *The students will describe what happens during a hurricane.
- *The student will label and describe actions that people should take when a hurricane hits an area. The teacher will chart the actions. The students will create a T-chart to compare and contrast what happens during a hurricane and a tornado.

Practice Literacy Activities:

- *Have the students create a book about storms that happen around the world.
- *Place storm words on index cards and supply students with magnetic letters or gel bags. Have students create the words with the gel bags or the letters.
- *Have students use the sensory tub to act out the actions during a hurricane. Have them place boards around the table (because people board up their homes) and have them describe how boarding up the sides helps protect the areas from the waves created during the stormy weather.
- *Create storm puzzles that depict tornadoes, hurricanes, and thunderstorms using cardboard. Have students put the puzzles together and identify the different storms.

Reflect/Assess:

What happens during a hurricane?

What is the difference between a hurricane and a thunderstorm?

Literacy Circle:

Storytime 1:

The teacher will read *The Two Bobbies: A True Story of Hurricane Katrina, Friendship and Survival* by Kirby Larson. This book is a true story about two animals rescued after hurricane Katrina. This is a good story to read to the class to discuss real verse make believe and how sometimes good things come from bad experiences and storms.

Storytime 2:

The teacher will read *Magic School Bus Inside a Hurricane* by Joanna Cole. Following the story, have the students compare this story with the book about the two animals during hurricane Katrina.

Letter Knowledge: H is for Hurricane

Have the students manipulate play dough to make the letter H for a hurricane.

Second Language Learners:

Display pictures of all of the different storms that were discussed this week. Ask ELL students to point out and describe the different aspects of each storm. Have them act out the storm if they cannot recall the vocabulary.

Music/Movement:

Have the students play a game where they pretend that the wind is blowing in the hurricane. Call out a direction and have the students run with the wind in that direction. As they are running, call out a new direction and have students switch. Continue playing until the wind "slows down."

Materials for Day 5:

-books – *Sergio and the Hurricane*, *The Magic School Bus Inside a Hurricane*, *The Two Bobbies* -chart -markers

-play dough

Content Connection –Science/Math

Objective: The students will be able to chart the weather for a week.

The students will be able to compare the charted weather with the weather forecast accurately.

Vocabulary: weather, forecast, accuracy

Materials: chart labeled with Monday-Friday, pictures of weather, newspaper with daily weather forecast

Activity: At the beginning of the week, bring in the newspaper. Show the students the daily forecast. Ask the students to tell you what the weather is like that day. Chart the weather for the day. Also chart the weather forecast for the day. Continue this activity each day for the week. On the final day, compare the forecast and the true weather. Describe the "accuracy" of the forecast. Discuss with the students reasons why the weather forecast and the weather may or may not be different. Display your chart.

