Science Unit Plan

Second or Third Grade

"Weather"

By:

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SCED 364

Section 61

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I. ***Unit Topic:*** Weather

II. ***Grade Level:*** Second or Third Grade

III. ***Rationale:*** The main science goals of this unit are State Goal eleven and State Goal twelve. State goal eleven deals with scientific inquiry, solving problem, conducting experiments, and technology. This state goal is very important to the elementary level because students will need to learn how to use different types of technology in the future as well as conduct experiments on their own and in groups to help answer the questions they have. Some of the activities in this unit that deal with state goal eleven are Air Temperature, A Snap in Time, and Weather Reports, this is because the students are using technology to measure air temperature, and answer questions in Weather Reports and A Snap in Time. State Goal twelve states that an understanding of concepts, physical and earth science, as well as interconnections and principles takes place. This is important because a lot of things in life are connected and children need to see and understand why they are connected as well as why they take place and where they fit in with physical and earth science. Some of the lesson activities I have that display this are Cloudy Weather, and Water Wonders. Water Wonders is a great example of goal twelve because the students learn where the water cycle fits in with life and learns how it is connected.

In my unit plan there are also several different Science Process Skills that take place including inferring, and classifying. Students will be doing at least one of these skills in every activity and multiples in other activities. These are

important because these skills make the lessons hands on activities, which help the students understand and remember the information more, and for a longer period of time. Some other skills include predicting, developing vocabulary, formulating hypotheses, and making decisions along with several others. Also, throughout this unit there are unifying concepts and processes that take place. And one is, and which I believe is the main one, is Constancy. This is because the weather is all around the world, whether we can see it happening or not. Another concept is Change; this is because the weather is always going to be different, especially if one lives in a place where seasons happen. The weather can be hot and sunny in one place as well as cold and snowy in another. Weather changes constantly and sometimes it makes it hard to keep up with or predict what happens next. And the last concept that takes place with this unit is System. This is because there are several different things that make up the category of weather, like wind, rain, snow, and even hurricanes. All of these weather patterns combine into one big system called weather.

This unit is related to the real word again because weather is all around us and it always will be. The students need to how weather works, as well as the different types of weather so they can be prepared properly when things happen, for example, something big like a natural disaster, or something little like an inch of snow. Students all need to learn this because weather helps the earth stay on track; it rains to supply water to oceans, animals, plants, as well as humans. Without water everything else would essentially be dead or very unhealthy. This

unit plan is very important and will be very fun for the students to learn with all the activities planned and learning taking place.

IV. Resources:

- AIMS
- Project Learning Tree
- Nature Scope

V. Citations:

AIMS Education Foundation. (2008). *Primarily Weather.* Fresno, CA.: Author.

Environment Education Activity Guide. (2002). *Project Learning Tree.* Washington, D.C.: Author.

Learn About Earth Science: Weather. (2000). *Sunburst Technology.* Pleasantville, NY.: Ed. Emilie Rappoport.

Wild About Weather. (1985). *Ranger Rick's Nature Scope.* Washington, D.C.: Author.

Cloudy Weather Activity

Objectives:

a) After this lesson students will know what clouds are made of.

b) After this lesson students will know the five main types of clouds, cumulus, stratus, cumulonimbus, cirrus as well as Cirrocumulus.

c) When this lesson is complete students will be able to identify the different types of clouds in pictures.

Standards:

- ✓ **State Goal 12:** Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

- ✓ **E:** Know and apply concepts that describe the features and processes of the Earth and its resources.
  - **Standard 12.E.1a:** Identify components and describe diverse features of the earth's land, water and atmospheric systems.
  - **Standard 12.E.1b:** Identify and describe patterns of weather and seasonal change.
  - **Standard 12.E.2a:** Identify and explain natural cycles of the Earth's land, water and atmospheric systems (e.g., rock cycle, water cycle, weather patterns).

Description: For this hands on activity students will be going outside on a day that the weather permits and observe as well as classify the clouds in the sky. Before we go outside the students will look at pictures of clouds and then we will find the clouds in the sky. Then I will give the students a worksheet that has a section where they are able to draw the clouds they see. Here the students' will be observing and classifying the clouds and looking for what they have learned in class. There are also two questions on the worksheet one of which asks the students to describe the clouds they see and the other asks what the students think make up clouds. The students should be able to answers both these questions fully.

Air Temperature Activity

Objectives:

a) When this lesson is finished students will be able to explain what makes the temperature of objects go up and down.

b) After this lesson students will know what is inside the thermometer that tells the temperature.

c) When this lesson is done students will be able to read a thermometer accurately.

Standards:

- ✓ **State Goal 11:** Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.
- ✓ **A:** Know and apply the concepts, principles and processes of scientific inquiry.
  - ➢ **Standard 11.A.2b:** Collect data for investigations using scientific process skills including observing, estimating and measuring.
  - ➢ **Standard 11.A.1c:** Collect data for investigations using measuring instruments and technologies.
  - ➢ **Standard 11.A.3c:** Collect and record data accurately using consistent measuring and recording techniques and media.

Description: During this activity the students will be working with thermometers and learning how to read them correctly as well as measure and record their data. I will give the students a worksheet with three thermometers. The students will able be in groups looking at three different thermometers finding their specific temperature. When they find the temperature, they are to color in their thermometers on their worksheet in red to match the alcohol up to the temperature that their thermometer reads. The students will also need to record the temperature of each thermometer at the top of their worksheet.

Lecture Day

Objectives:

a) When this lesson is complete the students will have a better understanding on tree components.

b) After this lesson students will have a better understanding of how to read thermometers and the temperatures they display.

Standards:

- ✓ **State Goal 11:** Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.
- ✓ **A:** Know and apply the concepts, principles and processes of scientific inquiry.
  - ➢ **Standard 11.A.1a:** Describe an observed event.
  - ➢ **Standard 11.A.1b:** Develop questions on scientific topics.

Description: For this lecture day, we will review the last two activities we have done so far. The two activities that we will talk about are, A Snap in Time and Air Temperature. Here we will review how to read a thermometer as well as review what is inside the thermometer that tells the temperature. We will also look at and share with the class, our tree pictures. We will review where the trunk, branches, bark, roots, and leaves are on the tree. We will so discuss what our trees looks like and why it looks that way because of the current season we are in.

A Snap of Time Activity

Objectives:

a) After this lesson the students will be able to name the main parts of a tree, the trunk, bark, branches, roots, and leaves.

b) When this lesson is complete students will be able to explain what trees look like at different time of the year, including summer, fall, winter, and spring.

Standards:

- ✓ **State Goal 11:** Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.
- ✓ **A:** Know and apply the concepts, principles and processes of scientific inquiry.
  - ➢ **Standard 11.A.3a:** Formulate hypotheses that can be tested by collecting data.
  - ➢ **Standard 11.A.2d:** Use data to produce reasonable explanations.

- **Standard 11.A.2e:** Report and display the results of individual and group investigations.

Description: For this activity, the students will going out side when weather permits and be observing trees around the school during the fall and recording their observations on a worksheet I will give them. Before we begin the activity we will review trees and what they look like in class. On the worksheet, the students will need to get a close up of the tree; this can be any tree, and draw a picture of the tree as a whole, a close up of what the bark looks like and a close up of what a branch looks like, as well as what the ground looks like under the tree.

Water Wonders Activity

Objectives:

a) After this lesson students will be able to explain all three components of the water cycle, evaporation, condensation, and precipitation.
b) After this lesson students will be able to understand how the water cycle works.
c) When this lesson is complete student will be able to communicate their journey through the water cycle.

Standards:

- ✓ **State Goal 12:** Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.
- ✓ **E:** Know and apply concepts that describe the features and processes of the Earth and its resources.
  - **Standard 12.E.1a:** Identify components and describe diverse features of the earth's land, water and atmospheric systems.
  - **Standard 12.E.1b:** Identify and describe patterns of weather and seasonal change.

- **Standard 12.E.2a:** Identify and explain natural cycles of the Earth's land, water and atmospheric systems (e.g., rock cycle, water cycle, weather patterns).

Description: For this activity the students will be experiencing what it is like to be in the water cycle. There will be seven stations set up around the room that each student will go to. Here the students will role a die and move around to each station with every role of a die. When at each station, the students will record what has happened to them by stating where they were, what happened, and their destination. When they have been through ten different stops, they will write on the back of the worksheet their entire journey through the water cycle. When they are finished the students will be communicating by getting into small groups and discussing with others their different journeys.

Computer Software Program

Objectives:

a) When this lesson is complete students will have a better understanding of weather components, for example, rain and snow.

Standards:

- ✓ **State Goal 13:** Understand the relationships among science, technology and society in historical and contemporary contexts.
- ✓ **B:** Know and apply concepts that describe the interaction between science, technology and society.
  - **Standard 13.B.1a:** Explain the uses of common scientific instruments (e.g., ruler, thermometer, balance, probe, computer).
  - **Standard 13.B.2a:** Explain how technology is used in science for a variety of purposes (e.g., sample collection, storage and treatment;

measurement; data collection, storage and retrieval; communication of information).

Description: For this day, we will take a break from all of our fun activities and play a computer software evaluation game. This software is all about weather and how it works. I will split the students up into groups of two to three and have them all sit at the computer and play around while learning from this game. In this game there are several components that deal with weather as well as characters in the game to help a person at anytime. I will start this game at the beginning of the school day and allow time throughout the day to have different groups get a change to play the game.

Weather Reports Activity

Objectives:

- ***a)*** When this lesson is finished the students will be able to tell all the different types of weather like cloudy, foggy, rainy, snowy, etc.
- ***b)*** After this lesson the students will be able to make a graph of weather.
- ***c)*** When this lesson is completed the students will be able to describe what it is like outside with certain types of weather, for example it is wet when it rains.

Standards:

- ✓ **State Goal 11:** Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.
- ✓ **A:** Know and apply the concepts, principles and processes of scientific inquiry.
  - ➢ **Standard 11.A.1e:** Arrange data into logical patterns and describe the patterns.
  - ➢ **Standard 11.A.2b:** Collect data for investigations using scientific process skills including observing, estimating and measuring.
  - ➢ **Standard 11.A.2c:** Construct charts and visualizations to display data.

Description: For this hand on activity, the students will be making a bar graph from the weather that they observe outside everyday for a total of eleven days by coloring the graph in with a different color for how many days, for example all the cloudy days will be colored blue and all the windy days will be colored purple. Here the students will each receive a graph with eight different types of weather at the bottom, these include, cloudy, foggy, hail, rainy, party cloudy, snowy, sunny, and windy. With this, the students will record how many days out of eleven that these weather types happened. Along with these recordings the students will be inferring that when it rains it is wet outside and when it is foggy, it can be hard to see clearly.

The Wind Blows (Integrated Activity)

Objectives:

- ***a)*** After this activity, students will be able to have an idea of how well things blow in the wind.
- ***b)*** After this activity, students will be able to fill out a chart correctly by measuring and ordering.

Standards:

- ✓ **State Goal 6:** Demonstrate and apply a knowledge and sense of numbers, including numeration and operations (addition, subtraction, multiplication, division), patterns, ratios and proportions.
- ✓ **A:** Demonstrate Knowledge and use of numbers and their representations in a broad range of theoretical and practical settings.
  - ➢ **Standard 6.A.2:** Compare and order whole numbers, fractions and decimals using concrete materials, drawings and mathematical symbols.
- ✓ **State Goal 7:** Estimate, make and use measurements of objects, quantities and relationships and determine acceptable levels of accuracy.

- ✓ **A:** Measure and compare quantities using appropriate unites, instruments, and methods.
    - ➢ **Standard 7.A.1a:** Measure length, volume and weight/mass using rulers, scales and other appropriate measuring instruments in the customary and metric systems.
    - ➢ **Standard 7.A.2a:** Calculate, compare and convert length, perimeter, area, weight/mass and volume within the customary and metric systems.

Description: For this activity, students will be going outside on a windy day when the weather is appropriate to see how different objects blow in the wind. The students will be measuring three times the distance of each object, which include a feather, leaf, piece of paper, and a piece of a foam cup blown by the wind only. The chart the students need to fill out will need to have the name of the object, three different types of measurement and then place the objects in order from the farthest to the shortest it blew with number one being the farthest. The students will also be measuring in feet by using a tap measure. This activity is integrated by math.

Lecture Day

Objectives:

a) After this lesson, the students will have a better understanding of how to order objects.

b) When this lesson is complete the students will have a better understanding of how to spell weather related words.

Standards:

- ✓ **State Goal 1:** Read with understanding and fluency.
- ✓ **A:** Apply word analysis and vocabulary skills to comprehend selections.

- **Standard 1.A.1a:** Apply word analysis skills (e.g., phonics, word patterns) to recognize new words.

- ✓ **State Goal 7:** Estimate, make and use measurements of objects, quantities and relationships and determine acceptable levels of accuracy.
- ✓ **A:** Measure and compare quantities using appropriate unites, instruments, and methods.
    - **Standard 7.A.1a:** Measure length, volume and weight/mass using rulers, scales and other appropriate measuring instruments in the customary and metric systems.

Description: For this lecture day, we will review the last two activities that we have done so far, and these are intergraded activities. The activities we will review are Weather Wise Riddles and The Wind Blows. Here we will review the words we had to figure out on the worksheet with the riddles. We will go over each riddle and say as a class, which word that riddle, is trying to express. We will also review our measurements as a class with the Wind Blows Activities. We will also compare answers with the class to see which object blew the furthest.

Picturing Precipitation (Integrated Activity)

Objectives:

a) After this lesson students will be able to name several different types of precipitation.
b) When this lesson is complete students will be able to tell the difference between the different types of precipitation.
c) When this lesson is complete, students will sing about rain.

Standards:

- ✓ **State Goal 26:** Through creating and performing, understand how works of art are produced.
- ✓ **B:** Apply skills and knowledge necessary to create and perform in one or more of the arts.
    - ➢ **Standard B.3c Music:** Sing or play with expression and accuracy a variety of music representing diverse cultures and styles.
    - ➢ **Standard B.2d Visual Arts:** Demonstrate knowledge and skills to create works of visual art using problem solving, observing, designing, sketching and constructing.

Description: For this lesson activity, the students will be learning about several types of precipitation mainly rain, snow, sleet and hail. After learning these, the students will draw two pictures of themselves in their favorite types of precipitation, for examples playing in the rain or the snow. The students will then learn a song about rain that is to the tune of "Do Your Ears Hang Low?" There are also different versus to this song that deals with hail, snow, and sleet. Music and Art integrate this activity.

Weather Wise Riddles (Integrated Activity)

Objectives:

a) When this lesson is complete the students will be able to describe a little bit about the different types of weather, like snowflakes, hail, and sleet.

b) After this activity, students will be able to spell, read, and write weather related words correctly.

Standards:

- ✓ **State Goal 1:** Read with understanding and fluency.
- ✓ **A:** Apply word analysis and vocabulary skills to comprehend selections.

- **Standard 1.A.1a:** Apply word analysis skills (e.g., phonics, word patterns) to recognize new words.
- **Standard 1.A.1b:** Comprehend unfamiliar words using context clues and prior knowledge; verify meanings with resource materials.

✓ **B:** Apply reading strategies to improve understanding and fluency.

- **Standard 1.B.1a:** Establish purposes for reading, make predictions, connect important ideas, and link text to previous experiences and knowledge.

Description: For this activity, the students will be reading riddles about weather and then the students will have to figure out or guess what type of weather they are talking about by only the riddle and the number of letters that are in the word. There are eleven different riddles but the first is completed for them so they have a better understanding of how to complete the others. This activity is integrated with Language Arts by reading, writing, and spelling.

Cloudy Weather Assessment (Skill Task Assessment)

Teacher Page:

I. Title: Knowing the Clouds!

II. Objectives:

1) After this assessment students will be able to match a cloud name with its definition.
2) After this assessment students will be able to define a cloud type orally.

III. Science Concept: One unifying concept this assessment has is consistency. It has consistency because the cloud types will always be the same and will always have the same name. These cloud types will also always have the same definition even though they can be described in several different ways.

IV. Illinois State Standards:

- ✓ **State Goal 11:** Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.
- ✓ **A:** Know and apply the concepts, principles and processes of scientific inquiry.
  - ➢ **Standard 11.A.1e:** Arrange data into logical patterns and describe the patterns.
  - ➢ **Standard 11.A.2c:** Construct charts and visualizations to display data.
  - ➢ **Standard 11.A.2d:** Use data to produce reasonable explanations.

*V. **Grade Level:*** The grade level this is intended for is second or third grade.

*VI. **Time:*** This assessment should only take about five to ten minutes:

*VII. **Materials:*** The materials that this assessment will need are the name of the different types of clouds. These clouds include Cumulus, Cumulonimbus, Stratus, Cirrus, as well as Cirrocumulus. These will be cut out into piece of paper with their name in big bold print. Another material that will be needed is the definitions of each cloud type. These as well will be cut out of pieces of paper with their definition in bold print. The students will also need their science book to help them.

*VIII. **Teacher Preparation:*** The teacher preparation for this assessment is to have all the materials set up correctly at the table. The cloud types will need to be on the top left, the definitions on the top right, and a science book in the middle. The teacher will also need to have all these cut out and ready to go before the students get to class so there is no rushing through and no time wasted.

*IX. **Extension/Modifications:*** For the special needs students in my class, I will have them do the exact same assessment, but I will only have them match three out of the five cloud types and definitions. This way they are still engaged in the

assessment like all the other students, but it is not too challenging for them to give up quickly.

Student Page:

I. ***Title:*** Knowing the Clouds!

II. ***Objectives:***

1) After this assessment students will be able to match a cloud name with its definition.
2) After this assessment students will be able to define a cloud orally.

III. ***Materials:*** The materials that this assessment will need are the name of the different types of clouds. These clouds include Cumulus, Cumulonimbus, Stratus, Cirrus, as well as Cirrocumulus. These will be cut out into piece of paper with their name in big bold print. Another material that will be needed is the definitions of each cloud type. These as well will be cut out of pieces of paper with their definition in bold print. The students will also need their science book to help them.

IV. ***Diagram of Set-Up:*** Please see attached drawings!

V. ***Directions for Students:*** First, I want you to look at the set-up of your table. What do you see? On the top left hand side of the table, you will see there are five different cloud types that we learned in class. In the middle of the table you will find our science book, use this to help you in matching the definition to the cloud. And at the top right hand side of the table you will see the definition of each cloud type. As you look at these names and definitions and decide which one matches with which, I want you to out the name of the cloud on the table and what you

think its definition is right beside it to the right of the word. Put the next cloud and its definition the same way but put it under the last cloud and its definition.

Rubric:

Set-Up:

The clouds and definitions are set-up the way the directions say:	**2 point**
The clouds and definitions are not set-up the way the directions say:	**0 points**

Clouds and Definitions:

All five definitions are matched with their cloud:	**10 points**
Four definitions are matched with their cloud:	**8 points**
Three definitions are matched with their cloud:	**6 points**
Two definitions are matched with their cloud:	**4 points**
One definition is matched with its cloud:	**2 points**
No definitions are matched with their cloud:	**0 points**

Total Points: _____ **/ 12**

Cloudy Weather Assessment (Extended Investigation)

Teacher Page:

I. ***Title:*** Cool Cumulus Clouds!

II. ***Objectives:***

1) When this assessment is finished students will be able to identify Cumulus clouds in the sky.

2) When this assessment is complete students will draw Cumulus clouds to the best of their ability.

III. Science Concept: One unifying concept that this assessment has is change. This is because the sky and clouds are not going to look the same everyday. Someday we may not see any clouds and other days we may see clouds but not the specific one we are looking for. The weather is constantly changing and the clouds are forever changing as well.

IV. Illinois State Standards:

- ✓ **State Goal 11:** Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.
- ✓ **A:** Know and apply the concepts, principles and processes of scientific inquiry.
  - ➢ **Standard 11.A.1f:** Compare observations of individual and group results.
  - ➢ **Standard 11.A.2d:** Use data to produce reasonable explanations.
  - ➢ **Standard 11.A.2e:** Report and display the results of individual and group investigations.

V. Time: This assessment will take two school weeks worth of time to really get the information needed.

VI. Materials: The materials that will be needed for this assessment is the worksheet for the observations as well as a pencil to make their recordings. Each student will need a new worksheet everyday to make their observations and each student will need their own individual sheet.

VII. Teacher Preparation: Some teacher preparation will be needed for this assessment. First the teacher will need copies of the worksheet for each student individually in the class. The teacher will also need this same number of copies for each student over the next two weeks. So, these can all be made now or made everyday.

VIII. ***Extensions/Modifications:*** For the special needs students in my class, I will have them do the exact same assignment, but I will pair them with a different student each day to help them. This way they are still engaged, but if they have questions their fellow classmates are there to help if necessary.

Student Page:

I. ***Title:*** Cool Cumulus Clouds!

II. ***Objectives:***

1) When this assessment is finished students will be able to identify Cumulus clouds in the sky.
2) When this assessment is complete students will draw Cumulus clouds to the best of their ability.

III. ***Materials:*** The materials that will be needed for this assessment is the worksheet for the observations as well as a pencil to make their recordings. Each student will need a new worksheet everyday to make their observations and each student will need their own individual sheet.

IV. ***Diagram of Set-Up:*** Please see attached drawings!

V. ***Directions for Students:*** First, I want you to look at your worksheet, is there anything that needs to be filled out before we go outside? Please fill in today's date as well as the day we are observing, for example, this is the first day so please fill in the number one on the line. Once we get outside, I want you to look at the sky for as long as possible. I want you to make sure you see as much of the sky as you can to get an accurate observation. When you are finished you need to record what you saw and record if there were any Cumulus clouds. If there were according to your observations, draw a picture of what you saw.

Rubric:

Date:

Date is recorded for each day:	**2 points**
Date is not recorded for each day:	**0 points**

Day:

Day we recorded for each day:	**2 points**
Day is not recorded for each day:	**0 points**

Recordings of what was saw:

Recordings are present and accurate:	**6 points**
Recordings are present:	**3 point**
No recordings are present:	**0 points**

Drawings:

Drawings are present when Cumulus clouds are present:	**2 points**
Drawing are not present when Cumulus clouds are present:	**0 points**

Total Points: _____ **/ 10**

**** Since this will take place over a course of two weeks, an assessment will take place once a week. Each week will be worth 10 points so over the entire assessment, it will be worth 20 points.**

**** Partial credit will be given for recordings that are present and accurate, but still need more detail as to what was seen.**

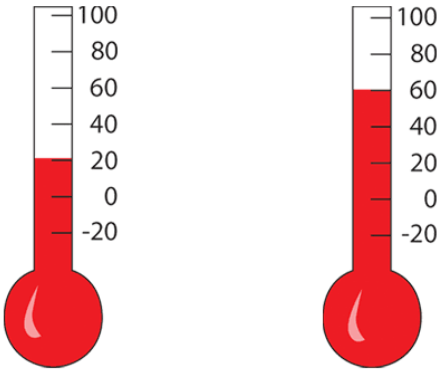
Air Temperature Assessment (Matching)

Directions: Put the correct answer on the line to the left that matches the statement on the right.

1.) _____ Summer	A.) 5º	E.) 60º
2.) _____Winter	B.) 45º	F.) 20º
3.) _____ Fall	C.) 90º	
4.) _____ Spring	D.) 65º	

5.) _____ is the temperature of the first thermometer.

6.) _____ is the temperature of the second thermometer.



Air Temperature Assessment Rubric (Matching)

1.) C	**2 points**
2.) A	**2 points**
3.) D	**2 points**
4.) B	**2 points**
5.) F	**2 points**
6.) E	**2 points**

Total Points _____ **/ 12**

A Snap of Time Assessment (True/False)

Directions: Put the correct answer on the line provided to the left of the statement.

1.) _____ In the Spring the leaves on the trees are starting the bloom.

2.) _____ In the Fall there are lots of leaves on the ground near the tree.

3.) _____ In the Winter the tree bark look very healthy.

4.) _____ In the Summer the branches on trees look very strong.

5.) _____ In the Spring the leaves on the trees start to change colors.

6.) _____ In the Fall there are no leaves on the trees at all.

7.) _____ In the Winter there is bright green grass under the tree.

8.) _____ In the Summer there is bright green grass under the tree.

9.) _____ In the Fall the branches and bark start to become weak.

10.) _____ In the Summer the trees are full over green leaves.

A Snap of Time Assessment Rubric (True/False)

1.) True	**1 point**
2.) True	**1 point**
3.) False	**1 point**
4.) True	**1 point**
5.) False	**1 point**
6.) False	**1 point**
7.) False	**1 point**
8.) True	**1 point**
9.) True	**1 point**
10.) True	**1 point**

Total Points _____ / 10

Water Wonders Assessment (Essay)

Directions: Write to the best of your ability what you know about the water cycle in at least 7 sentences.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Water Wonders Assessment Rubric (Essay)

Main Components:

Include all three components of the water cycle: Evaporation, Condensation, and Precipitation	**3 points**
Include two main components of the water cycle`:	**2 points**
Include one main component of the water cycle:	**1 point**
Include no components of the water cycle:	**0 points**

Definition:

Include a definition of all three components:	**6 points**
Include a definition of two components:	**4 points**
Include a definition of one component:	**2 points**
Include no definition of the components:	**0 points**

What happens during each main component:

Includes what happens at all three phases:	**6 points**
Includes what happens at two phases:	**4 points**
Includes what happens at one phase:	**2 points**
Includes nothing during the phases:	**0 points**
Total Points	**_____ / 15**

**** Partial credit will be given to those students who begin to explain the definition or what happens during the phases but doesn't quite get all the information needed. These students will be awarded 5, 3, or 1 point(s) depending upon how many components they write about.**

**** Partial credit will not be awarded for just naming the three main components. Each component needs to be included.**

**** Spelling will not be an issue.**

Water Wonders Assessment (Interview)

Teacher Page:

I. ***Title:*** My Water Cycle Journey!

II. ***Objectives:***

1) During this assessment students will be able to mention the three main parts of the water cycle.
2) During this assessment students will be able to tell me about three different stops they made during their journey.
3) During this assessment students will be able to tell me what they liked about their journey.

III. Science Concept: The unifying concepts that this assessment has are change and consistency. There is change in this assessment because not all the students will be going through and experiencing the same journey. No two journeys will be the same. There is also consistency in this assessment because the students will each be mentioning the three components of the water cycle, as well as three different stops, and what they liked about it. Also, each student will experience evaporation, condensation, or precipitation at least once during his or her journey.

IV. Illinois State Standards:

- ✓ **State Goal 12:** Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.
- ✓ **E:** Know and apply concepts that describe the features and processes of the Earth and its resources.
  - ➢ **Standard 12.E.1b:** Identify and describe patterns of weather and seasonal change.
  - ➢ **Standard 12.E.2a:** Identify and explain natural cycles of the Earth's land, water and atmospheric systems (e.g., rock cycle, water cycle, weather patterns).

V. Grade Level: This assessment is intended for students in second or third grade.

VI. Time: This assessment should take no longer than five to seven minutes.

VII. ***Materials:*** The materials that I will need as the teacher will be a piece of paper and a pen to take notes of what the students have mentioned and what they have not. I will also need a copy of the rubric to help me assess.

VIII. ***Teacher Preparation:*** There will not be much teacher preparation for this assessment. I will only need to have all the materials I need ready to go for each student.

IX. ***Extensions/Modifications:*** For special needs students, I will have them do the exact same assignment, but I will limit what they have to include in their summaries. I will only allow them to make mention of two components of the water cycle and have them tell me one stop during their journey.

Student Page:

I. ***Title:*** My Water Cycle Journey!

II. ***Objectives:***

1) During this assessment students will be able to mention the three main parts of the water cycle.
2) During this assessment students will be able to tell me about five different stops they made during their journey.
3) During this assessment students will be able to tell me what they liked about their journey.

III. ***Materials:*** There are no materials needed for the students, only the information in their brains.

IV. ***Diagram of Set- up:*** Please see attached drawings!

V. ***Directions for Students:*** While giving me your summary of the water cycle, I will want you to mention at least five things. These are as follows:

1) Mention Evaporation:
2) Mention Precipitation:
3) Mention Condensation:
4) Mention at least three different stops during your journey.
5) Mention what you liked about your journey.

During this assessment, you will be standing with me at my desk telling me all of these components. While we are speaking, the other students will be busy doing other work so they are unable to listen to our conversation. This assessment will be worth ten points, two for mentioning each component I have listed.

Rubric:

Components:

Mentioning all three components of the water cycle:	**6 points**
• Evaporation, Condensation, Precipitation	
Mentioning two components of the water cycle:	**1 point**
Mentioning one component of the water cycle:	**.5 points**
Mentioning no components of the water cycle:	**0 points**

Journey:

Mentioning five different stops:	**2 points**
Mentioning three or four stops:	**1 point**
Mentioning one or two stops:	**.5 points**
Mentioning no stops:	**0 points**

Likeness:

Mention how they liked their journey:	**2 points**

Mention no liking of their journey: **0 points**

Total Points: **_____ / 10**

Weather Reports Assessment (Multiple Choice)

Directions: Circle the correct answer, either A, B, C, or D, to the left of the answers.

1.) How many days did it rain?
   A.) Four
   B.) Two
   C.) Six
   D.) Thirteen
2.) How many days was it partly cloudy?
   A.) Five
   B.) Seven
   C.) Three
   D.) One
3.) How many days did we see fog?
   A.) One
   B.) None
   C.) Ten
   D.) Eight
4.) Did it snow any days?
   A.) Yes
   B.) No
5.) How many days was it windy?
   A.) Nine
   B.) Four
   C.) Two
   D.) One
6.) What type of graph did we make?

A.) Bar

B.) Circle

C.) Line

D.) Picture

7.) What is it like outside when it rains?

A.) Hazy

B.) Wet

C.) Cold

D.) Sunny

8.) How many more days was it sunny than cloudy?

A.) One

B.) Three

C.) Two

D.) Four

9.) How many days did we observe the weather?

A.) Twelve

B.) Thirteen

C.) Ten

D.) Eleven

10.) How many days did it hail?

A.) One

B.) Eight

C.) Seven

D.) Nine

Weather Reports Assessment Rubric (Multiple Choice)

1.) B **2 points**

2.) D **2 points**

3.) A	**2 points**
4.) B	**2 points**
5.) D	**2 points**
6.) A	**2 points**
7.) B	**2 points**
8.) B	**2 points**
9.) D	**2 points**
10.) A	**2 points**

Total Points _____ **/ 20**