

Integrated Curricular Unit PLANNING GUIDE

Please use this form as a thinking/discussion guide. We anticipate changes as you go along.



PLEASE COMPLETE THE PLANNING GUIDE ELECTRONICALLY AND SAVE AS A WORD DOCUMENT. IN ADDITION TO HARD COPY SUBMISSION, EMAIL A COPY OF THE ENTIRE DOCUMENT TO YOUR MENTOR. REFER TO GUIDELINES FOR SUBMITTAL DEADLINE DATES. (NO HANDWRITTEN PLANNING GUIDES WILL BE ACCEPTED)

Teacher (name/grade): Polly B. Powell Sixth Grade

Artist (name/discipline): Francesca Genovese/ Dance

Connecting Topics: Weather and Dance
(ex: *American Revolution & Improvisation*)

Inquiry Question: Where is there movement in weather?

Subject Area: Science

Planning dates: July 9, November 4, 11, 23 Number of Students:
104

Bell Schedule: Four classes will be involved in this unit. The time for each class is listed below:

Second Period - 9:44 AM - 10:34 AM

Fourth Period - 11:32 AM - 12:22 PM

Sixth Period - 1:20 PM - 2:10 PM

Seventh Period - 2:14 PM - 3:04 PM

Classes for 4th, 6th, and 7th period will be in Room B103. Classes for 2nd period will be in the Health room (no number).

Student Academic objective(s): *(Teachers, please include subject area, state goals, standards and objectives)*

Standard 6-4: The student will demonstrate an understanding of the relationship between Earth's atmospheric properties and processes and its weather and climate. (Earth Science)

6-4.1 Compare the composition and structure of Earth's atmospheric layers (including the gases and differences in temperature and pressure within the layers).

6-4.2 Summarize the interrelationships among the dynamic processes of the water cycle (including precipitation, evaporation, transpiration, condensation, surface-water flow, and groundwater flow).

6-4.4 Summarize the relationship of the movement of air masses, high and low pressure systems, and frontal boundaries to storms (including thunderstorms, hurricanes, and tornadoes) and other weather conditions.

6-4.6 Predict weather conditions and patterns based on weather data collected from direct observations and measurements, weather maps, satellites, and radar.

6-4.7 Explain how solar energy affects Earth's atmosphere and surface (land and water).

Student Artistic objective(s): *(Artists, please identify an artistic skill/process that will help achieve the academic objectives. Refer to the SC Standards for your art form)*

Dance Objectives for Grades 6 - 8

I. TECHNIQUE. Identifying and demonstrating movement elements and skills in performing dance.

A/B. Demonstrate the following movement skills and explain the underlying principles: skeletal alignment, balance, initiation of movement, articulation of isolated body parts, weight shift, elevation and landing, fall and recovery, contraction and release, and the use of breath to support movement.

C. Identify and demonstrate basic dance steps, positions, and patterns for dance from at least four different styles or genres (e.g., ballet, modern, tap, social, folk).

D/E. Transfer a complex spatial pattern (e.g., circle, spiral) from the visual to the kinesthetic (e.g., use a spatial pattern found in the surrounding environment to create a similar spatial pattern in a movement sequence, replicate the spatial pattern of a set dance sequence).

F. Safely maintain personal and general space while moving.

G. Transfer a complex rhythmic pattern from the auditory to the kinesthetic.

H. Identify and demonstrate a range of movement qualities (e.g., sustained, percussive, vibratory, bound, free flowing).

I. Demonstrate accurate memorization and reproduction of movement sequences.

K. Describe the action and movement elements observed in a dance, using the appropriate movement/dance vocabulary.

L. Refine technique through teacher evaluation and correction.

IV. CRITICAL AND CREATIVE THINKING. Applying and demonstrating critical and creative thinking skills in dance.

A. Create a movement problem and demonstrate multiple solutions; then identify the most interesting solutions and defend their choices.

B. Compare and contrast two subtly differing dance compositions in terms of space (e.g., shape, pathways), time (e.g., rhythm, tempo), and force/energy/movement qualities (e.g., weight, flow).

C. Formulate opinions about the quality of dances on the basis of established criteria.

D. Participate in class discussions about the nature of dance (e.g., what dance is, what qualities establish dance as a unique art discipline and distinguish it from other art forms).

E. Demonstrate appropriate audience behavior while watching and responding to dance

VI. HEALTHFUL LIVING. Making connections between dance and healthful living.

- A. Identify at least five goals to improve their own dancing and explain how they plan to reach these goals.
- B. Explain strategies for treating and preventing dance injuries.
- C. Create original warm-up exercises and discuss how these exercises prepare the body and mind for functional and expressive purposes.
- E. Identify the benefits of dancing as part of a healthy lifestyle for people of all ages.

VII. CONNECTIONS. Making connections between dance and other disciplines.

- A. Create a project that reveals similarities and differences among the arts.
- B. Cite examples of concepts used both in dance and in disciplines outside the arts, (e.g. human anatomy in science, shape in architecture, historical dance works in social and political history.)

Connections: *(Write a brief paragraph describing the connections you will explore between the art form and the content)*

The major weather concepts that we will be integrating with dance are the water cycle, cloud shapes, layers of the atmosphere, and the weather conditions present during natural disasters like tornadoes, hurricanes, thunderstorms and blizzards. In each of these instances, there is movement involved - movement of water molecules, atoms of the gases in the atmosphere, wind speed, fronts and energy transfers, among others. Students will be taught techniques of movement using the acronym BEST. They will use phrasing, patterns and space to illustrate the water cycle. They will associate the levels of movement with the levels of clouds. The different characteristics of movement, such as rhythm and change in timing, will be used to represent the different characteristics of weather.

Anticipated process & Learning experience: How will students explore these connections? How does integrating these standards with this art form create a richer learning experience for students? Why do students learn more by doing it this way?

Integrating dance and science (weather) creates a much richer learning experience for the students in many ways.

1. Researches have found that arts learning can have a defined impact on the academic performance of students in an urban setting. It enables students to overcome obstacles to success such as poverty and lack of parental support. Since our school is in an urban setting and many of our students have academic and social problems, it is important to use every possible method to provide them tools to succeed. The learning style of many students in my classes is kinesthetic. They have difficulty processing information that is presented in a visual or auditory manner. Since dance allows these students to move and show what they know without having to read and write, they experience a measure of success. A feeling of success in one area could bridge to other areas of learning. The end result is that a student, once disengaged, becomes interested in school.
2. Dance could offer gifted and talented and/or high achieving students, who experience success on an everyday basis, unlimited challenge. No longer will the "smart" student know all the answers!
3. The social interaction of the students may change when all students succeed. This could impact the entire class and improve the learning environment.
4. Another way the learning is deepened is by requiring the students to think creatively. Creating movements to illustrate some aspect of weather requires higher level thinking skills and allows multiple responses. Asking students to create their own movements requires that students evaluate which movements will convey internal thoughts, feelings, or patterns and deepens their reasoning ability and problem solving skills.

5. Creative problem solving is basic to our daily lives. An inquiry approach (read problem-solving here) is used to train the students to problem solve and direct their own learning. Relating weather and creative movement will reinforce this skill.

The overriding theme of sixth grade science in our school is "How are you influenced by the natural world and how is the natural world influenced by you? Exposing students to creative movement will provide an authentic learning experience some might never have the opportunity to experience. It will engage multiple skills and talents and will mature the development of cognitive, social and personal competencies.

Art form/anticipated learning artifacts: (photos, recordings, reflections of the learning process) Several different learning artifacts will be used to record the student's two week experience. Digital photographs, as well as video recordings, will be taken for display on the school web-site. Written reflections using the Metropolitan Arts Council and the Carolina Ballet Theatre forms will be used at the end of the grant period. Discussions at the end of each session based on the inquiry question will help the artist and teacher evaluate what is being learned about both the subject area and the dance requirements.

Unit activities ideas: Describe both artist and teacher activities:

Preliminary knowledge: Frontloading: How will you activate student curiosity, prior knowledge, memories and emotions so that students make strong connections and get the most learning during the unit?

The week prior to the grant period, students will be introduced to the inquiry question, "Where is there movement in weather?" Students will review the water cycle and where movement occurs during the water cycle will be emphasized. Most students have mastered this concept by middle school. Additional information about the water cycle, such as transpiration and respiration, will be added to the student's prior knowledge. Secondly, the students will create a map of the earth's atmosphere and participate in an activity entitled "The Moving Wall". The idea of moving through space and timing will be introduced in this activity. The conditions needed for tornadoes, hurricanes, blizzards and thunderstorms will be researched during the teaching day on December 9.

Beginning: How will the unit start? What resources will be needed?

The unit will start with an introduction of movement by Ms. Genovese. **(FRANKIE, CAN YOU ADD THE INFORMATION HERE FOR BEST?)** She will provide the CD of music for the unit and a small CD player will be provided by the teacher. The inquiry question will be introduced at the beginning of the unit. Activities at the beginning of the unit will be teacher directed. The levels of the atmosphere will be compared to the levels of movement and a level game will be conducted.

Middle: How will the unit proceed?

The students will be divided into groups. Each group will represent a different part of the water cycle to create one large group water cycle. As students become more accustomed to the principles of movement, each group will be asked to create its own water cycle. The group will work together to create movement for each part of the water cycle. The lessons will progress from teacher directed and demonstration to more student creativity.

End: How will the unit conclude?

The unit will conclude with each student applying all aspects of BEST and the weather conditions to create a dance about either a tornado, hurricane, thunderstorm, or blizzard.

Personal/Social connections: How will you use the inquiry question to help students make personal connections with the content area? With the art form? How will you continue to explore these connections throughout the unit?

Everyone is affected by the weather! It determines what we wear, what we do, and how we act. A characteristic of sixth grade students is perpetual movement. Trying to teach students with constantly moving body parts the boring topic of weather is difficult. What better way to take advantage of "what is" than to use movement to learn about the weather? On a personal level, students can use movements to become more physically fit, possibly lose weight, deal with stress, improve self-esteem, and/or learn skills (sequencing, memorization, listening and following directions) that will make them more successful in school. Individual movement responses require critical thinking skills of analysis, synthesis and evaluation - skills that improve with use. Scientist Root-Berstein sums up the impact the arts have on science.

Various artistic insights have actually preceded and made possible subsequent scientific discoveries. The arts thus can stimulate scientific progress, These skills include the abilities to observe acutely, to think spatially and kinesthetically to identify the essential components of a complex whole to recognize and invent patterns, to gain what the Nobelist Barbara McClintock called "a feeling for the organism" - empathy with the objects of study, and to synthesize and communicate the results of one's thinking visually, verbally, or mathematically. (Root-Bernstein, 1998.)

Dance develops interpersonal and teamwork skills. Asking the student to choreograph a movement with a group of peers requires cooperation, attentive listening, and clear communication of directions and corrections. The students have the opportunity to learn and practice behaviors that are necessary for success in the workplace.

Answering the inquiry question: How will you create experiences in each session that allow students to answer the inquiry question in deeper, more comprehensive ways? What aspects or sub questions of the inquiry question will you explore?

Requiring the students to use prior knowledge of the water cycle, the layers of the atmosphere, cloud shapes, and the conditions necessary for the formation of hurricanes, tornadoes, thunderstorms and blizzards to choreograph tableaux, phrases and other creative movements will promote the development of multisensory individuals. What is learned in multisensory ways is tends to be remembered longer.

In what way(s) will students answer the inquiry question? (*example: writing, creative dramatics, creative movement, music, visual art*)

Students will answer the inquiry question through creative movement.

How will you use this information to inform future session and progress of the unit?

Information will be used to determine the student's understanding of the concepts concerning weather. Since this unit only addresses four of the weather standards, future work on weather standards will involve creative movement, both to learn the information or as an alternate form of evaluation.

Unit Support (*Questions to consider/discuss*)

Artist: What can the teacher do to best help you with the unit? (*Preparation, behavior management, support during and after the unit, etc.*)

The teacher can best help by frontloading the concepts concerning water cycle, layers of the atmosphere, cloud shape and the conditions necessary for the formation of a tornado, hurricane, thunderstorm or

blizzard. She needs to be responsible for classroom management during the unit. The students need to see the teacher as an enthusiastic participant and learner in the unit activities.

Teacher: What will you do during the artist sessions? What will you do to prepare for the artist sessions and how will you continue to support the inquiry on non-artist days?

I plan to be an enthusiastic participant in the first part of the unit. At the same time, I will be observing the students as they participate. I do not feel that it would be fair for me to be a part of a student group trying to create parts of the water cycle, however, I will listen and observe the groups as they cooperatively work together to create movements. At times, I will be photographing and video taping the activities as they occur.

Assessment: indicators of learning: What formative assessment strategies will you use throughout the unit to inform your teaching? What summative assessment will you use at the end of your unit to assess overall student learning? If using a rubric(s), please provide an electronic copy.

Photographs/digital movies will be taken of students during the two week experience. These will be added to the website and displayed in the hall. Rubrics will be used to evaluate the students understanding of movement principles and weather standards. (Frankie, can you add rubric here?) Students will be asked to do a final reflection of the experience at the end of the unit. Eventually students will be tested on the information concerning weather.

Schedule of Artist Sessions – *Please notify your MENTOR of any changes*

Session Dates & Times <i>(indicate exact times you will be in classroom)</i>	Activity(s) <i>(describe the activities designed for each session)</i>	Role of Teacher	Role of Artist	Reflection & Meaning Making <i>(writing, interview, visual, tableaux, discussion, etc.)</i>
1 Date: 12/07 Time: 8:15-3:00	Introduction of STIR Introduction of inquiry question	Frontloading of weather concepts and classroom management	Directing exercises to make students aware of movement principles	Discussion/ oral reflection
2 Date: 12/08 Time: 8:15-3:00	Level game - individual and group dealing with atmospheric layers	Classroom management and enthusiastic participation/Assisting with reflection	Directing activities/ Begin to involve student creativity	Tableau
3 Date: 12/10 Time: 8:15-3:00	Group work with each group being part of 1 big water cycle		Directing collaborative student creativity using movement	Discussion/Oral reflection
4 Date: 12/11 Time: 8:15-3:00	Individual groups are each a water cycle - group works together to create movement for each part of the cycle		Directing individual student creativity regarding the water cycle	Individual reflection form
5 Date: 12/14 Time: 8:15-3:00	Work as a class to review cloud shapes- activities dealing with levels and space		Directing activities requiring more student creativity /less teacher demonstration	Stationary movement/tableau
6 Date: 12/15 Time: 8:15-3:00	Using positive and negative space to create air movements and fronts/timing		Directing activity	Student choreography with a starting and ending point using 2 counts of 8 Rubric
7 Date: 12/16 Time: 8:15-3:00	Weather prediction, conditions and patterns -	Teach conditions and characteristics of tornados, hurricanes, blizzards and thunderstorms	Direct activity that requires students to pick 3 characteristics of a natural diasater	Videotaping/ Photography
8 Date: 12/17 Time: 8:15 - 3:00	Carry over from Day 7 General Review	Assist with reflection forms and closure of unit	Provide closure to movement part of the unit	MAC and CBT reflection forms

Process Documentation: How will you work together to document the process throughout the unit? What types of documentation are meaningful for this unit? Consider who will document during different activities.

Documentation will involve video recording and photographing students as they work through each phase of the project. Discussions and individual reflection will give us feedback concerning the student's learning.

How will you use this documentation to enhance student reflection and learning?

Documentation provides explicit reflection for students to recall each step of the projects and associated concepts, steps and ideas/vocabulary that relate. Students will be assessed on their participation and progress throughout the unit.

Vocabulary: What vocabulary will be introduced? Include vocabulary for content area, art form and any other new vocabulary introduced in this unit.

Science Vocabulary - evaporation, condensation, precipitation, accumulation, respiration, transpiration, atmosphere, troposphere, stratosphere, mesosphere, thermosphere, ionosphere, exosphere, air pressure, radiation, hydrosphere, density, cirrus, stratus, cumulus, front, cold front, warm front, stationary front, occluded front, tornado, hurricane, thunderstorm, blizzard, weather, water cycle

Dance Vocabulary - choreography, general space, levels, phrase, timing, energy, (Frankie, Please add as needed!)

Materials: What materials or supplies will you need for this unit? (Please include details on page 3)
There will not be any materials or supplies needed for this unit.

Teacher Learning:

What will the teacher learn during this unit that will add tools to his/her teaching toolbox? Be specific. (ex: specific activity, element of art form, printed resources, introduction to a piece of art, how to access and encourage student creativity)

For me, this will not be an easy unit in which to participate. I have never felt that I danced or moved very well and am self-conscious about how I look. I am hoping to overcome this during the unit. I am always looking for ways to address multiple intelligences in my classroom. Many students who cannot succeed with written requirements will be able to succeed with artistic activities. I feel it will help students maintain an interest in learning by offering alternative ways in which to master the required material. This arts integration unit will motivate the students. It also helps me model ways to cooperate and collaborate with others when I work with the artist to accomplish our objective.

How will you work together to ensure that teacher comfort and confidence in these skills are growing throughout the unit?

I will use movement as a method of checking for understanding and as an alternate form of evaluation. Students will have the opportunity to incorporate movement in every unit that we study. This will allow the students to evolve and express their learning in more creative ways throughout the year.