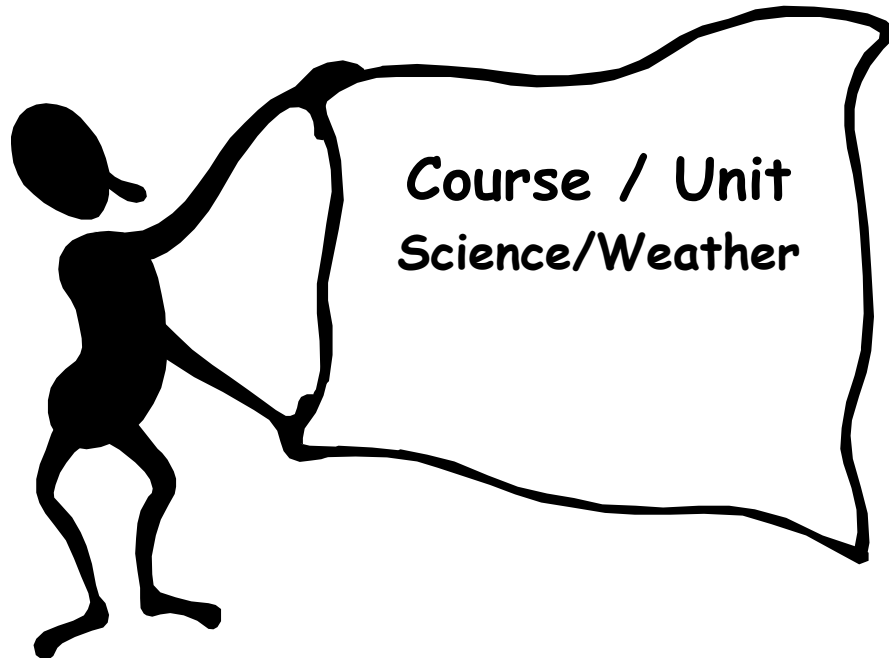


New York City Department of Education
Magnet Program District 25 & 28

School Name

MS217



Essential Question: How do people adapt to the weather in their environment?

Suggested Time Frame: 4-6 weeks

Theme: Environment

Graphic Overview of Unit
Suggested Time Frame: 3-4 weeks

Essential Question: How do people adapt to the weather in their environments?

Weather

Matter

Energy, types of energy, heat as energy

Weather is caused by interactions of matter and energy
Factors that affect weather

Earth's atmosphere and its role in the formation of weather

Extreme weather

Mini-Units

* It is recommended that each mini-unit end with a standardized test that reflects the state / city assessment

Unit's Culminating Project: (briefly explain in 2-3 sentences):

Research and present strategies to survive in different extreme environments on earth.

Stage 1- Desired Results	
<p>Standards-Based Learning Goals: PS 3.1a, 3.1c-f, 4.2c, 4.2d, 3.1h, 4.5a,b, 4.1a, 4.2a,b, 3.2a, 4.2c,d, 2.1a,c,d,j, 2.2i,k,r 4.1a,c,d, 4.4a,b, 2.2 l-p, 2.2q</p>	
Concepts	
<p>Big Ideas for this Unit</p> <p>Survival Interactions Environment</p>	<p>Magnet School Theme: Green (Environmentally friendly--Humanities)</p> <p>How does the Big Idea in your unit connect to your theme?</p> <p>Students will use their knowledge of weather to determine how to adapt and survive in different natural environments of the world.</p>
<p>Enduring Understandings Weather is a product of interaction between energy and matter. By studying weather patterns, humans can devise means to interact and adapt to their environment in order to survive. Human actions impact the environment</p>	<p>Overarching Essential Question: (this question should connect to your school theme)</p> <p>How do people adapt to the weather in their environment?</p>
Content and Skills	
<p>Content</p> <p>Students will know...</p> <p>Sun as a source of energy, heat and light energy, matter, phases of matter, causes of phase change, atmosphere, hydrosphere, lithosphere, conduction, convection, radiation, Hydrosphere/atmosphere interactions: Water cycle, evaporation, condensation Precipitation Earth's atmosphere, energy transfer in the atmosphere, air movements</p> <ul style="list-style-type: none"> • Weather factors: Pressure, relative humidity, temperature, wind, weather patterns, • Air masses and fronts • Extreme weather events: hurricanes, tornadoes, blizzards, drought <p>weather vs. climate, relationship between latitudes and climate, factors that dictate habitability: Shape of the earth, proximity to the water, latitudes, altitude</p>	<p>Skills</p> <p>Students will be able to...</p> <p>Identify and label the layers of the atmosphere Create a model of the earth showing the hydrosphere, lithosphere and atmosphere Recognize the cause of heating and cooling Explain the water cycle by making a labeled model Perform an experiment to illustrate the change of state of matter due to heating and cooling Illustrate formation of wind by doing an experiment Research and document selected severe weather conditions Perform an experiment to understand conduction and convection and complete a lab report. Complete lab to explain the role of shape of the earth on the temperature. Collaborate using technology (Google docs) to complete assigned research projects. Recognize and analyze patterns and trends. –Sequence events. Identify cause-and-effect relationships --Given the latitude and longitude of a location, indicate its position on a map and determine the latitude and longitude of a given location on a map. – Generate and interpret field maps including topographic and weather maps. -Predict the characteristics of an air mass based on the origin of the air mass</p> <p>Technology: create podcasts</p>

Stage 2- Summative Assessment Evidence
<p>If students understand, know and are able to do the items in Stage 1, they should be able to show their understanding by completing an authentic task found in the world beyond the classroom.</p> <ul style="list-style-type: none"> ➤ Design the Culminating/Summative Task: ➤ Please note: The Essential Question and the Grasp are interconnected. The GRASP is a way for students to demonstrate their knowledge and understanding unit by answer of the Essential Question. Or you can say, they are answering the essential question through their GRASP. <p>G- (goal) Students will work in groups to create podcasts recommending survival strategies for extreme weather conditions in different parts of the world.</p>

R- (role) survival strategists

A- (audience)adventure seekers

S- extreme adventure

P- podcasts to recommend survival strategies in different extreme weather environments

S- In the podcast:

Identify geographical features that make the place challenging

Identify weather conditions that contribute to the inherent hazards of the location

Give clear recommendations for surviving in the given conditions.

Attach a list of survival paraphernalia required for your location.

Student Task

In the space below, write the task exactly as students will see it.
You should give this task to them on the first day of the unit. This way they know where they are going.

Your company "Roughing It Inc." arranges adventure trips to different exotic locations for thrill seekers. It is important to business that your clients enjoy their trip and return safely no matter how exotic and dangerous the locale. Working in groups of four, you must create a survival guide in the form of a 2 minute podcast for one of the following travel packages.

Crossing Death Valley at the height of summer
Crossing Lut desert of Iran on a camel
Crossing Siberia by sleigh
Climbing Mt. Everest
7 days in Antarctica
Following a twister in Oklahoma
Climbing Mount Washington, New Hampshire
A week in the Amazon rainforest

Podcast must include:

- Exact location of the destination: Continent, country, latitude, longitude.
- Hazards of the location that might appeal to your targeted thrill-seeking clients
- Map showing weather patterns throughout the year
- Usual and unusual weather conditions in the area at different times in the year
- Best time to travel for extreme, medium and low level thrill
- Recommended list of supplies for surviving in the area
- Required documents and immunization

Make sure the clients understand that interactions between matter (water, land & air) and energy (thermal energy) can create some extremely hazardous weather conditions in these areas!

The following items must be uploaded on the company website:

- Podcast
- Survival list
- Map.
- List of documents needed for travel to destination

Roles: all assume role of researchers and help in all aspects of the final project.

Script writer: Will write the script for the podcaster, using the collective research

Survival Strategist: Compile a list of dos and don'ts for survival in the targeted extreme environment.

Podcaster: To create the podcast

Techie: Upload all required documents and the podcast on the company website.

Note: Make sure you keep a hard copy of all your research.

Rubric For Culminating Project

www.rubistar.com

Project Component	1	2	3	4
List of supplies/necessary documents	List may be inaccurate and incomplete or missing	Incompletely researched list of supplies and documents	Complete list with some inaccuracies	Complete and accurate list as required by the task
Map of location showing weather conditions throughout the year	Map has more than 5 inaccuracies or is missing	Map contains 2 to 5 inaccuracies	Map may contain some up to two inaccuracies	Map complete and accurate
Collaboration	Incomplete work. May not accept help or not complete work in spite of offers of assistance from other members of the group	Completes work with help from other members of the group.	Completes work accurately and in a timely manner. Fulfills allotted responsibilities as a part of the group	Student completes accurately and completely all assigned work in a timely manner. Participates fully in all research and helps other members of the group
Survival podcast	Little or no role in creating the podcast	Completes his/her role in creating the podcast with some help	Fulfills his/her role in creating the podcast	Expertly Fulfills his /her role in creating the podcast
Cooperation	Partners argue or are disrespectful of other's ideas and input. Criticism is not constructive nor is support offered. The work is mostly done by one or two people.	Partners show respect for one another's ideas and divide the work fairly. There is little evidence of a commitment toward quality work in the group.	Partners show respect for one another's ideas and divide the work fairly. There is commitment by some members toward quality work and support of one another.	Partners show respect for one another's ideas, divide the work fairly, and show a commitment to quality work and support for each other.

