**Grade** **Level**: 4th grade **Dates**: January 10th – Feb 7th

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| **School Information****School**: Copeland Elementary **School Code**: 060043**Teachers**: David, Jennings, Nelson **Buffer**:  | **Transdisciplinary Theme**: How the World Works **Segment of Theme**: The impact of scientific and technological advances **Over Arching Concept**: Science and technology  |
| **Section 1: Overview** |
| **Central Idea**: Scientific and technological advances impact the way people live. |
| **Key Concepts**: Form, Causation, Change |
|  **Guiding Related Concepts**:  |  **Lines of Inquiry**: |  **Teacher Questions (Guided Questions)**: |
| CommunicateExpansionInhabitantsPatternsEconomy | Economic, geographic, social and technological conditions contribute to change. Through help the use of scientific tools, we can adapt to different types of weather.Water’s unique properties allow it to move seamlessly on Earth | **DOK Level 3 & 4** How does expansion and westward movement impact individuals and societies?How can the inhabitants and/or resources of a place be a source of conflict?How can patterns change over time based on temperature and the dynamics of nature? Explain the technologies influenced the westward expansion?Describe the conflicts that arose from the westward expansionHow do weather conditions change?Describe various ways in which weather is measured.Why does the sun heat different surfaces at different rates?Support explanations of weather using evidence.Define the term water cycle. Explain the meaning for each six major processes that take place in the water cycle. Explain how the water cycle works in the outdoors.How could your family reduce water use to minimize water pollution? |
|  **Prior Content Knowledge**: |  **Assessing the Lines of Inquiry**: |
| Students will utilize the wonder wall in the classroom to share what they know, what they want to know and what they learned.  | How will you assess student’s understanding of the lines of inquiry? |
| **Section 2: What Are Our Target Goals?** |
| 1. **Concept Based Summative Assessment:**
 | 1. **Targeted Approaches to Learning (highlight 3):**
 | 1. **Targeted Learner Profile Attributes (highlight 2):**
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| Weather Project: Students will work in groups to create a weather video acting as a meteorologist. Water cycle project: Develop models to illustrate multiple pathways water may take during the water cycle ( evaporation, condensation, and precipitation)  - Define the term water cycle* Explain the meaning for each of the six major processes that take place in the water cycle
* Choice Board: Poster (Visual), PowerPoint, Video (Flip Grid), Model, Brochure, Essay

War of 1812 movie poster: Students will create a poster about the events leading up to the war. * Poster should address the historical sources
* Students may opt to do an essay or a detailed outline in place of the poster
* Extension/Enrichment: Create a video about whether the westward expansion was destined and/or justified
 | Social Skills, Research Skills, Communication Skills. Thinking Skills, Self-Management Skills  | well-balanced, caring, principled, open-minded, risk taker, knowledgeable, communicator, reflective, thinker, inquirer |
| **Section 3: What Assessments will be provided in this unit of inquiry?** |
| 1. Pre-Assessments:

What assessment will be given at the beginning of the unit to inform current understanding  | 1. Formative Content Based Assessments:

What assessments will be given to monitor student learning of content? | 1. Summative Content Based Assessments:

What assessments will be given for students to show mastery of unit content? |
| 1. Canvas Pre- Test
2. KWL Chart
 | 1. Exit tickets- Students will complete a graphic organizer to show the step of the water cycle
2. Create an annotated illustrations (e.g. comic strip, political cartoon, timeline) that depicts technology forces that influenced westward expansion.
3. 3-2-1 prompt-Students will list 3 things they learned about westward expansion and water cycle, 2 things they want to learn more about, and 1 thing they have a question about
4. Quizzes- Given weekly to assess students understanding of the westward expansion and water cycle.
 | Collaborative Inquiry project: Create a video documentary about whether or not westward expansion was destined and/or justified.Collaborative inquiry water cycle project: Students will create a water cycle in a plastic bag to show all steps of the water cycle.  |
| **Section 4: How will we Facilitate Learning?** |
| 1. Provocation:

How will interest into this unit be sparked? | 1. Learning Experiences:

What activities/experiences will help facilitate the learning? | 1. Evidence of Differentiation:

How will the learning experiences be adjusted to different learning styles/abilities? |
| * Role Play: Teacher will assume the role of President James Madison. With the students, they will brainstorm solutions on how to solve America’s pending problems with Britain and France in the early 1800s. Students will learn about Madison’s actual choice to declare war, thus beginning the War of 1812. (Essential Question: How could the use of today’s technology improved James Madison’s brainstorming?)
* Virtual Fieldtrips: The US Capitol and The White House
* Trail of Tears video: <https://www.youtube.com/watch?v=1Q5Z4UUitdU>
* The Battle of Little Bighorn video: <https://www.youtube.com/watch?v=nZzfQQJTz50>

Weather Tools – Turn and Talk – Blind inquiry into weather toolsTeacher made weather video – Teachers will create a video acting as the meteorologists. Outdoor cloud drawing – matching drawings to the cloud chart. Read aloud – Cloudy with a Chance of Meatballs Water Cycle – Demonstration/Video (teacher made or through one of our science resources) Water Cycle – Magic School BusBroken pieces activity: The teacher will break up the central idea into word/phases on chart paper. Students will walk around writing down in their own words what the word/phrase means to them. | Week1 Standards: SS4H3 Explain westward expansion in America. a. Describe the causes and events of the War of 1812; include the burning of the Capitol and the White House and the writing of “The Star Spangled Banner.”* KWL Chart: Students will share what they Know, Want to know and what they Learn about the War of 1812.
* What Do You Think? Put a T if you think the sentence is true, and an F if you think the sentence is false.
* War of 1812 Movie Poster: Students will create a movie poster for the War of 1812, Students will imagine that they have been hired by a filming company to advertise for a movie about the main events of the War of 1812.

Week 2 Standards: SS4H3 Explain westward expansion in America. b. Describe the impact of westward expansion on American Indians; include the Trail of Tears, Battle of Little Bighorn and the forced relocation of American Indians to reservations.Standards: SS4H3 Explain westward expansion in America. c. Describe territorial expansion with emphasis on the Louisiana Purchase, the Lewis and Clark expedition, and the acquisitions of Texas (the Alamo and independence), Oregon (Oregon Trail), and California (Gold Rush and the development of mining towns).  Provocations:* Trail of Tears video: <https://www.youtube.com/watch?v=1Q5Z4UUitdU>
* The Battle of Little Bighorn video: <https://www.youtube.com/watch?v=nZzfQQJTz50>

 Activities:* Map Activity: Give out map activity sheets so students can color in the areas to see the size of the Louisiana Purchase.

 Week 3S4E4. Obtain, evaluate, and communicate information to predict weather events and infer weather patterns using weather charts/maps and collected weather data. a. Construct an explanation of how weather instruments (thermometer, rain gauge, barometer, wind vane, and anemometer) are used in gathering weather data and making forecasts. b. Interpret data from weather maps, including fronts (warm, cold, and stationary), temperature, pressure, and precipitation to make an informed prediction about tomorrow’s weather.  S4E4. Obtain, evaluate, and communicate information to predict weather events and infer weather patterns using weather charts/maps and collected weather data. c. Ask questions and use observations of cloud types (cirrus, stratus, and cumulus) and data of weather conditions to predict weather events. d. Construct an explanation based on research to communicate the difference between weather and climate. Provocations:* Read Aloud – Cloudy with a Chance of Meatballs
* Turn and Talk- Weather Tools– Blind inquiry into weather tools
* Teacher made weather video – Teachers will create a video acting as the meteorologists
* Question: If you were a meteorologists, how would you report extreme weather.

Activities:* Student made weather video: Students will use teacher made video as an example to create their own weather videos. Students can work individually or with a partner.
* Outdoor cloud drawing: – Matching drawings to the cloud chart.
* Chart the Weather: [Graphing the Weather (uen.org)](https://www.uen.org/lessonplan/view/18981)

 Week 4 Standards: S4E3. Obtain, evaluate, and communicate information to demonstrate the water cycle. a. Plan and carry out investigations to observe the flow of energy in water as it changes states from solid (ice) to liquid (water) to gas (water vapor) and changes from gas to liquid to solid.Standards: S4E3. Obtain, evaluate, and communicate information to demonstrate the water cycle. a. Plan and carry out investigations to observe the flow of energy in water as it changes states from solid (ice) to liquid (water) to gas (water vapor) and changes from gas to liquid to solid. b. Develop models to illustrate multiple pathways water may take during the water cycle (evaporation, condensation, and precipitation). (Clarification statement: Students should understand that the water cycle does not follow a single pathway.) Provocations:  * Water Cycle Demonstration/Video: (teacher made or through one of our science resources)
* Magic School Bus Video: Wath Magic School bus video explaining the Water Cycle

Activities: * Water Cycle Activity: <https://www.generationgenius.com/videolessons/water-cycle-video-for-kids/?gclid=Cj0KCQiA0fr_BRDaARIsAABw4EsNvN6IBtYG586KCAX5CPc-ampxg4ENjJZDaz04h7iQGxPMw_iNU7kaAv8DEALw_wcB>

  * Water Cycle Project: Develop models to illustrate multiple pathways water may take during the water cycle (evaporation, condensation, and precipitation)

 | * Leveled Readers
* Stations based on ability
* ReadWorks differentiated passages
* Social Studies Weekly Videos
* Small group / working in pairs
* Teacher assistance
* Para / Literacy Para assistance as needed
* Modified assignments as needed
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| 1. Learning Experiences in Specials:

How are Specials Courses able to connect to this unit? | 1. Local/National/Global Connections:

How can we connect the content to local/national/global issues? | 1. Student Action:

What learning experiences support potential student-initiated action? |
| SpanishLanguage B will support the unit by reinforcing the Spanish vocabulary about weather and weather patterns. | We can connect the content to local/national/global issues by having students:1. Research how water connects us all. Students can also watch and read the local weather forecast and explain how what we are learning in class compares to real world examples..
 | * War of 1812 Movie Poster: Students will create a movie poster for the War of 1812, Students will imagine that they have been hired by a filming company to advertise for a movie about the main events of the War of 1812.
* Student made weather video: Students will use teacher made video as an example to create their own weather videos. Students can work individually or with a partner.
* Water Cycle Project: Develop models to illustrate multiple pathways water may take during the water cycle (evaporation, condensation, and precipitation)
* Weather Charting: Students will record the daily weather, noting changes in clouds and temperature.
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| 1. Student Agency and Play:

What learning experiences provide students with voice, choice and ownership? What play opportunities will be provided by Kindergarten/Pre-K?hands on/STEAM for K-5? | 1. Resources:

Which resources will you and the students use? This may include people, places, technologies, learning spaces and physical materials.  |
| * Water Cycle Project: Develop models to illustrate multiple pathways water may take during the water cycle (evaporation, condensation, and precipitation)
* Weather Project: Students will work in groups to create a weather video acting as a meteorologist.
* War of 1812 movie poster: Students will create a poster about the events leading up to the war.
* Students will record the daily weather, noting changes in clouds and temperature.
 | * Laptops
* Social studies Weekly
* IReady
* Read works
* Myon
* BrainPOP
* Media Center
* Art Class
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| **Section 5: Reflection** (Write the year, change font color for each year) |
| 1. Reflect on learning experiences:
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| Nelson- The students were able to experience great learning opportunities. The students enjoyed the activities that were created to make the connections to their new and prior learning. I believe that their favorite experiences were pretending to be meteorologists and the Water Cycle project.Jennings- I can say the students really learn and enjoyed learning about the water cycles, I think this the only lesson they really enjoyed. David- The students really enjoyed the learning opportunities that were present in this unit. Students loved the water cycle bag activity and enjoyed going outside to see which phases were present. The students also enjoyed all of the videos and other opportunities they had to enhance their learning.  |
| 1. How were the tasks differentiated to meet different learning styles?
 | 1. How did the learning experiences and strategies we used throughout the unit help to develop and show students understanding of the central idea?
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| Nelson- I was able to differentiate to meet the different learning styles by focusing on the needs of my expectational students. While planning and carrying out this unit I made that activities that would work for my Speech, IEP, 504, Gifted and ELL students. I created more rigor where it was needed and made activities less rigorous for certain students as well. We included learning experiences that were for visual, auditory, kinesthetic, and reading/ writing learners. I also included many technology activities as we have transitioned to a 1 to 1 school with laptops. Jennings- Far as learning styles it started off kind of hard but as we got into the lesson we was able to pull through it, still had trouble from some students but still Mrs. Nelson was able to help me included many technology activities as we have transitioned to a 1 to 1 school with laptops.David- I was able to differentiate my instruction to meet the needs of my various learners by catering to their different learning styles. I planned on certain task to be hands on for my kinetic learners, I provided audio readings and videos for my auditory learners, and provided lots of diagrams and pictures for my visual learners.  | Nelson- Students were able to make the connect between our study of the weather and the Westward expansion by giving examples of how it would have been beneficial to have the scientific and technological advances in weather that we have today.Jennings-Students were able to show their understanding of the Central Idea. The students understood that scientific and technological advances impact the way we liveDavid- My students displayed understanding of the central idea by being able to explain to their peers and I how scientific and technology advances are present in their lives today and in the world around them. They were able to connect prior learning to new learning experiences such as weather, water cycle and the westward expansion.  |
| 1. What learning experiences best supported students’ development and demonstration of the attributes of the learner profile and approaches to learning?
 | 1. How effective were the summative assessments in measuring student learning? What, if any, changes need to be made to the assessments?
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| Nelson- The learning experiences that best supported the student’s development and demonstration of the attributes of the learner profile and the approaches to learning were: Approaches to Learning:* Research: Students researched events related to the Westward Expansion.
* Communication: Students were communicators when sharing their 7 day forecast.
* Social: Students were social when they shared their War of 1812 posters.

Learner Profiles: * Communicator: Students had to be communicators when sharing in front of the class.
* Thinker: Students were thinkers when researching various topics.
 | Jennings- believe that the summative assessments were very effective in measuring student learning. I do not think that any changes will need to be made.David- The summative assessments we choose to measure students understanding for the unit were very appropriate. We also had enough time for students to complete each summative assessments. At this time no changes need to be made.  |
| 1. What student-initiated inquiries (questions) arose from this unit of inquiry?
 | 1. What student action arose from this unit of inquiry?
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| Nelson- Some student inquiries that arose during this unit were: Is the weather the same in Africa? How did the United States just add Louisiana? How can water just change to different forms?Jennings- Students was wondering who can up with the weather and how they know what the weather going be before I happen.David- When it is foggy outside what stage of the water cycle is that ? If the water never leaves the earth does that mean the water we drink is recycled ?  | Nelson- Some student actions that arose during this unit were students researching a 7 day forecast for any place in the world. The students then compared and contrasted the weather of their selected places. Jennings- Student compared and contrasted the weather of their selected places. |
| 1. Any additional notes or changes that need to be considered next year?
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| Nelson- I would recommend that we look at the POI as a whole and adjust the dates next year. Jennings-We had to shorten this unit by one week due to the previous unit running over. David- I think we need to plan out activities and timelines more strategically to ensure we have enough time to cover the unit without having to rush.  |
| **Section 6: Picture Evidence** |
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\*\*Scroll Down for Unit Standards\*\*

**Unit Standards**:

**ELA**:

**Math**:

**Science**:

**Social Studies**: