**Weather and Climate-unit 5**

**Time Frame-7 weeks**

**6th grade**

**Contact information for Marc Weinberg for Weatherman skype session: mweinberg@wdrb.com**

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| **Essential Questions** | **Phenomenon** |
| 1. What factors affect weather and climate? | Weather events (Thunderstorms, Droughts, Hurricanes, etc.) |
| 2. How do meteorologists predict the weather? | Weather prediction (meteorologist and the tools they use)Types of Precipitation (causes and clues) |
| 3. What are natural disasters and how are they predicted? | All natural disasters (Tornadoes, thunderstorms, forest fires, hurricanes |
| 4. How does the uneven heating and cooling of Earth’s atmosphere drive changes in the weather? | The movement of air masses (polar, tropical, continental, maritime) |
| 5. Compare and contrast weather and climate. |  |

**Learning Targets:**

* **We are learning how to interpret weather maps.**
* **We are learning how to explain the difference between weather and climate.**
* **We are learning how fronts affect our weather.**
* **We are learning how to explain the Coriolis Effect.**
* **We are learning how weather is predicted.**
* **We are learning how global learning is affecting our planet.**

**Vocabulary:**

**evaporation, condensation, relative humidity ,cirrus clouds, cumulus clouds, stratus clouds, air masses, tropical , polar, maritime, continental, jet streams, fronts, air mass**

**Core Standards:**

**NSTA Classroom Resources:** [**http://ngss.nsta.org/Classroom-Resources.aspx**](http://ngss.nsta.org/Classroom-Resources.aspx)

**Duck Soup**

**EdPuzzle**

[**Interactive STEM Activities - All areas**](https://learn.concord.org/) **Concord Consortium**

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| **Standard** | **Website Link** | **Activites** |
| 06-ESS2-6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. | <https://www.nextgenscience.org/sites/default/files/evidence_statement/black_white/MS-ESS2-6%20Evidence%20Statements%20June%202015%20asterisks.pdf> | [NSTA Vetted Activities](http://ngss.nsta.org/Classroom-Resources.aspx) |
| 06-ESS-5 Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. | <https://www.nextgenscience.org/sites/default/files/evidence_statement/black_white/MS-ESS2-5%20Evidence%20Statements%20June%202015%20asterisks.pdf> |  |
| ETS1-4 Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved. | <https://www.nextgenscience.org/pe/ms-ets1-4-engineering-design> |  |