Weather Patterns / Weather Fronts and Storms Project

<http://schoolvideonews.com/Lesson-Plans-Curriculum/Lesson-Plan-Creating-a-Student-Produced-Weather-Forecast>

For this project, you will be working with a partner to complete a weather forecast. Below are the objectives, requirements, and questions to turn in with your assignment.

Objectives:

1. Differentiate between basic and severe weather conditions, and develop an appropriate action plan for personal safety and the safety of others (DOK 1-3)
2. Observe and gather data for various weather conditions and compare to historical data for that date and location (DOK 1-2)
3. Use models to develop and communicate a weather prediction (DOK 1-2)

Requirements:

* Choose a location on the Earth. You may choose any location. Provide a city, state, and country where applicable
* Your location must receive some type of precipitation (Do your research!)
* You and your partner will need to both deliver the forecast (you will be the meteorologists!)
* Make up a reasonable weather forecast based on previous weather patterns for that location for a particular time / season of the year. (You can choose the season or time of year.)
* You need a 5 day weather forecast
* You need a 10 day weather forecast
* You need to include the weather for that day
* You need a map of local weather projections
	+ For example, if I chose to forecast Wiggins, CO weather, my local weather projections would include the entire northeastern portion of Colorado.
* Discuss the clouds present in your forecast (types and how they form)
* Discuss the precipitation in your forecast (types and what causes this type of precipitation)
* Include information about air pressure and pressure systems related to the weather in your location
* Discuss the relationship between the atmosphere and the weather in your location
* Include what climate zone your city is in. (HINT – there are 8 major climate zones)
* Classify whether the weather patterns in your location are severe or basic conditions and provide an action plan for residents

Questions you must answer and turn in with your presentation (On a separate sheet of paper):

1. Why does weather vary from day to day? (In general, not just for your location)
2. What are the strengths and limitations of different types of weather models?
3. What are the variables that make predicting weather challenging?
4. How do weather patterns relate to climate?
5. What is the difference between weather and climate?