**Weather Research and Presentation Activity**

**Earth Science, Mr. Lanik**

The first few classes of this atmosphere and weather unit has focused on the atmosphere, and the properties and forces that drive and create weather. Now I'd like you to demonstrate what you have learned about these topics by combining this information about the scientific properties of gases and the atmosphere with new ideas that you will learn through independent research. Essentially, you will be asked to use and apply your knowledge of how weather is created to explain some of nature’s most dangerous-- and most exciting-- weather!

Your task will be to become an expert in the field of a specific severe weather topic (thunderstorms, tornadoes, etc.). As an informed expert, you will then teach this specific weather concept to the class in a creative way. You will be working in groups of four to research, prepare, and perform a weather forecast and presentation.

You will be given several essential questions that you must address within your presentation. These questions will guide the scope of both your research and your presentation. Along with mastery of the important weather concepts of this unit, creativity will be an essential component of your presentation. Your presentation will consist of three pieces:

I) A weather forecast that you create: ***the most important piece is the scientific explanation of the atmospheric conditions that are guiding your forecast-- what is happening in the atmosphere that leads you to make this particular prediction?***

II) Historical Perspective: what is an example of a disaster associated with this type of weather? Provide statistics and an historical overview of one past event.

You MUST discuss EACH of the following factors in your actual weather forecast:

Humidity

temperature

air pressure

types of clouds/cloud cover

precipitation: types and quantities

wind

behavior(s) and properties of air mass(es)

fronts

season (time of year)

You will be responsible for:

1) Researching your severe weather topic

2) Presenting your topic to the class, in a creative way.

**Weather Forecast and Presentation: Group Grade**

I) A weather forecast that you create: the most important piece is the explanation of your forecast-- what is happening in the atmosphere that leads you to make this particular weather prediction? Total Points: 80

**Weather Terms/Factors used in Weather Forecast**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Term to be included in your Weather Forecast | Clearly Explains Role of Term in Development of Weather Pattern  **5 points** | Explains Role of Term in Weather Developments, but conclusion is incomplete/  inaccurate  **2-4 points** | Includes Term, but without explanation  **1 point** | Term not included  **0 points** |
| Humidity |  |  |  |  |
| Temperature |  |  |  |  |
| Air Pressure |  |  |  |  |
| Cloud Pattern(s) |  |  |  |  |
| Precipitation |  |  |  |  |
| Wind |  |  |  |  |
| Air Mass(es) |  |  |  |  |
| Front(s) |  |  |  |  |
| Season/Time Year |  |  |  |  |

**Content of Weather Forecast**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Meets Expectations | Mostly Meets Expectation | Partly Meets Expectations | Does Not Meet Expectations |
| Weather Forecast is easy to Follow | 10 | 8 | 5 | 0 |
| Forecast Accurately Explains how Weather Event Forms | 20 | 17 | 14 | 10 |
| Presenter is excited and Interesting | 5 | 4 | 3 | 2 |