

## Backward Design

### ***Stage 1: Desired Results***

Content Standard: Grade 5 Standard 8 – The Atmosphere

Conceptual Strand 8 – The earth is surrounded by an active atmosphere and an energy system that controls the distribution of life, local weather, climate, and global temperature.

Essential Questions – How do the physical characteristics and the chemical makeup of the atmosphere influence surface processes and life on Earth?

Understandings – 1. The student will be able to compare the climates of coastal and inland areas at similar latitudes to demonstrate the ocean's impact on weather and climate. **(See**

**Latitude/Longitude Chart)**

2. The student will use land maps to demonstrate how mountain ranges affect weather and climate. **(See Land Map Worksheet)**

3. The student will use weather maps of the United States to graph temperature and precipitation for inland and coastal regions. **(See Climograph 1, 2, 3 and Climograph Data 1, 2, 3) Also see Promethean Flipchart.**

4. The student will use local environmental information to analyze how weather and climate are affected by landforms and bodies of water. **(See Land Map Worksheet and interactive web maps of southeast region); Weather Station Science Lab with Rubric**

### ***Stage 2: Assessment Evidence***

Performance Tasks – 1. The student will describe the effects of the oceans on weather and climate.

2. The student will explain how mountains affect weather and climate.

3. The student will analyze and predict how major landforms and bodies of water affect atmospheric conditions.

4. The student will demonstrate knowledge through completion of post-test, poster displaying mountain ranges with weather and climate labeled for specific areas, correct analysis of weather

maps, completion of 3 climographs, and completed paper on findings from weather station class project.

***Stage 3: Learning Plan and Activities***

Textbook – Houghton Mifflin Harcourt Tennessee Science  
Chapter 7 Weather and Climate p. 240 – 269

**(See Vocabulary Matching Worksheet/Test)**

Blackline Masters - Unit Resources p. 142, 147, 152 and Teacher's  
Edition p. T41 – Vocabulary.

Science Lab Activities – Model of atmosphere **(See Science Lab);**

Textbook p. 245 Directed Inquiry activity; weather information  
available at [www.weatherchannelforkids.com](http://www.weatherchannelforkids.com) or local news  
website for Weather Station Class Project – also may use rain  
gauge, thermometer, barometer, and hygrometer to record daily  
readings for two weeks (10 school days). **(See Science Project  
Worksheet/Rubric)**

**Promethean Flipchart** can be used to introduce unit or as a  
review. It includes some of the information from Climograph Data  
1 and 2.

BrainPop videos (also check activity pages, graphic organizers,  
and experiment pages at BrainPop): Humidity, Earth's  
Atmosphere, Hurricanes, Weather, Temperature, and  
Thunderstorms.