NEVADA CLIMATE CHANGE PORTAL

Air temperature and relative humidity investigation

**Grade:** 9th – 12th

**Objective:**
The purpose of this investigation is to understand the relationship between relative humidity and temperature for a Transect Data Site.

**Materials:**
Instructions (below)
Temperature and Relative Humidity graph for the Sheep Range Blackbrush Research Site
Access to the Nevada Climate Change Data Portal

**Important Terms:**
Relative Humidity
Temperature
Sheep Range
Blackbrush plant community zone

**Driving Question:**
What is the relationship between relative humidity and temperature at a transect data site over a period of one week?

**Investigation:**
**Examine the Temperature and Relative Humidity graph for the Sheep Range Blackbrush Research Site and answer the following questions.**

1. Use the following site to view images of the Sheep Range Blackbrush site: http://sensor.nevada.edu/NCCP/Climate%20Monitoring/Web%20Cameras.aspx
   Click on the Latest Images link in the Sheep Range Blackbrush bar to view images of this site. Write a brief description of the vegetation and topography of the area.
2. What type, frequency, and amount of precipitation do you think characterizes this area?

**Use the graph of Relative Humidity and Temperature vs. Date for the Sheep Range Blackbrush Research Site to answer the following questions.**

3. Which day had the highest temperature, what was that temperature and what time of day did that temperature occur?
4. Which day had the lowest relative humidity value, what was that value, and when did it occur?

5. What is the general relationship between temperature and relative humidity through this one-week period during June of 2012?
6. Why do you think that the relationship you described in your answer to question #5 exists?
7. How do you think that this graph would change for a wetter, higher-elevation location in the Sheep Range such as the Pinyon-Juniper, Montane, or Subalpine zones?
8. How to you think that a temperature-relative humidity vs. time graph would look for a dryer, lower-elevation location, such as desert shrub? Draw a simple sketch graph to go along with your description.