# My NASA Data - Mini Lesson/Activity

# Shaconage: Blue Smoke

## Grade Band

- 6-8
- 9-12

## Time

- < 15 minutes

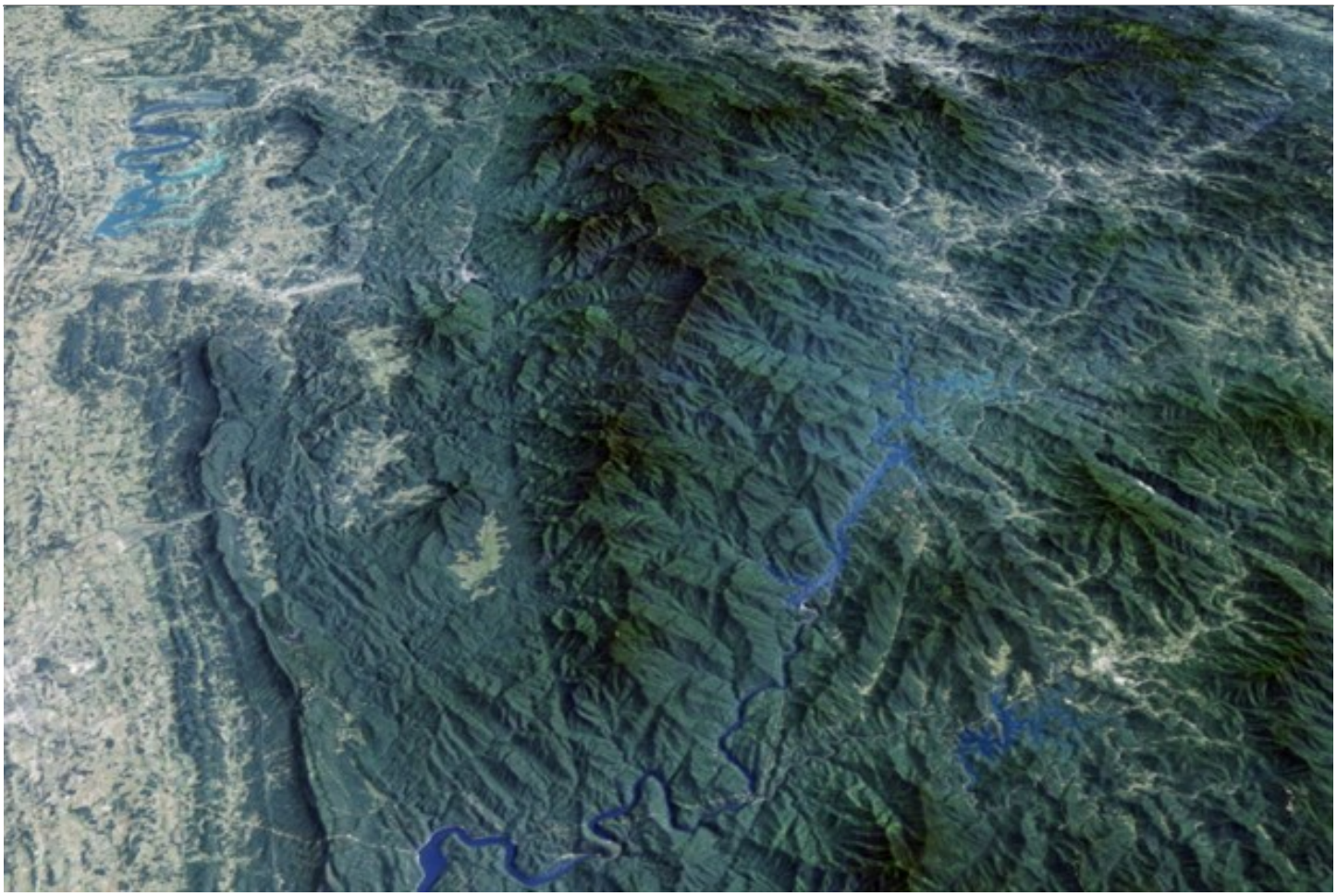
## Overview

The Great Smoky Mountains have a unique climate and weather pattern. Students will review a Landsat image and read about the history of the area and why Native Americans called the area “Shaconage.” Then they will answer the questions about what caused the unusual “blue smoke.”

## Student Directions

The satellite image below was stitched together from several Landsat 5 and Landsat 7 scenes. It is a best-pixel mosaic, representing the most cloud-free pixels during the summertime (June 21 - September 20) from 1986 to 2013.

Review the article: The 'Place of Blue Smoke'| NASA Earth Observatory, and answer the following questions.



The "Place of Blue Smoke." Source: NASA Earth Observatory. https://mynasadata.larc.nasa.gov/sites/default/files/inline-images/Picture1.jpg

**Steps:**

1. Check with your instructor on how to submit your answers.
2. Describe the conditions that contribute to “blue smoke.”
3. Explain how the conditions that create the “blue smoke” of this area are different from conditions that cause other aerosol pollutants.
4. Identify the first people who lived in the area described? Where did they go?
5. Explain the unintended consequences that occurred when European settlers moved in.
6. Where would you go to experience “blue smoke” and this location?

**Sources:**


1. NASA Earth Observatory. (2017, January 22). The 'Place of Blue Smoke'. NASA Earth Observatory. Retrieved August 23, 2022, from https://earthobservatory.nasa.gov/images/89485/the-place-of-blue-smoke?….


## Teacher Note

Teachers, these mini lessons/student activities are perfect "warm up" tasks that can be used as a hook, bell ringer, exit slip, etc. They take less than a class period to complete. Learn more on the "My NASA Data What are Mini Lessons?" page.

Teachers who are interested in receiving the answer key, please complete the Teacher Key Request and Verification Form. We verify that requestors are teachers prior to sending access to the answer keys as we've had many students try to pass as teachers to gain access.

## NGSS Three Dimensional Learning

### NGSS Disciplinary Core Ideas

- ESS3C: Human Impacts on Earth Systems

### Crosscutting Concepts

- Cause and Effect

### Science and Engineering Practices

- Obtaining, Evaluating and Communicating Information