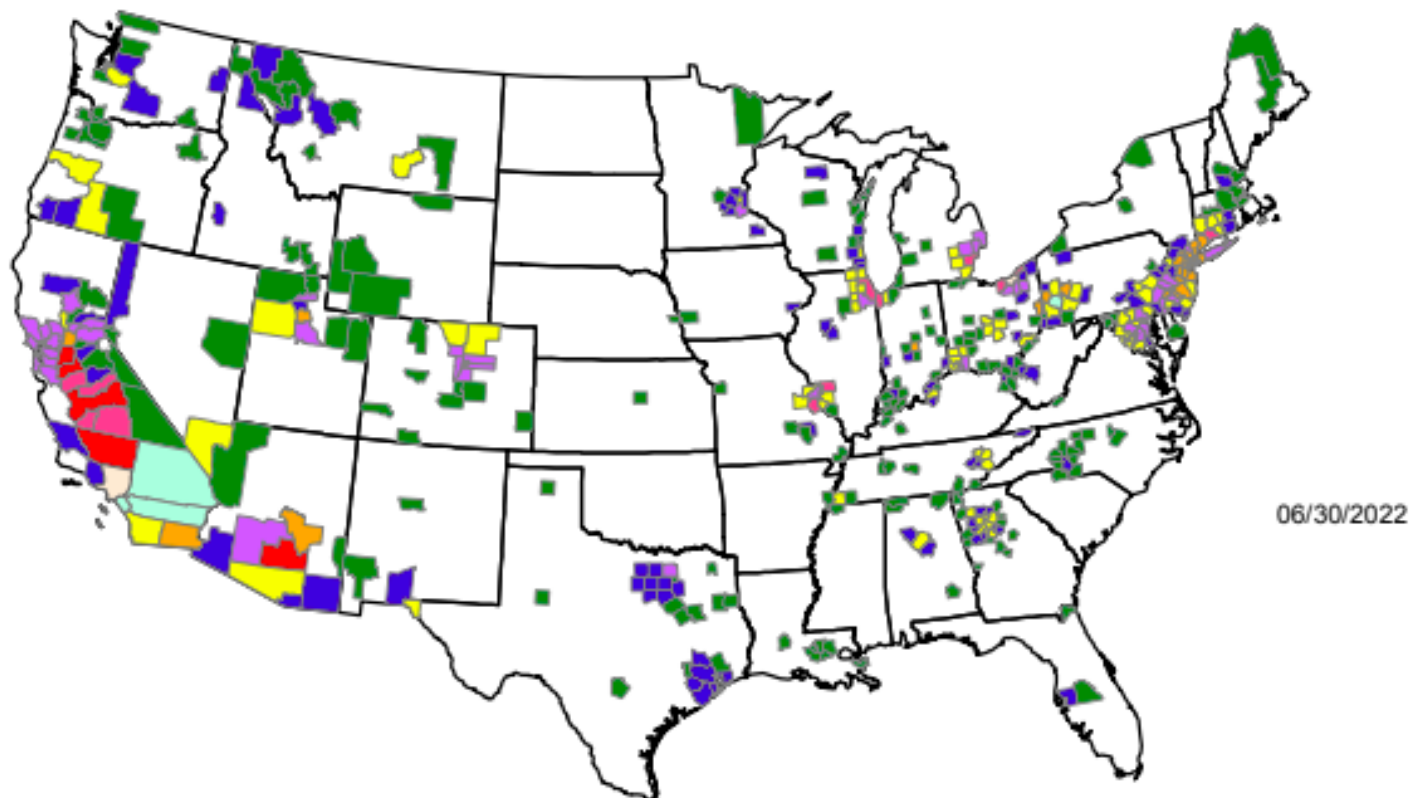

My NASA Data - Lesson Plans

Nonattainment Areas: Zoom In Inquiry



Overview

Students will engage in a “Zoom In Inquiry” learning routine to understand a world map that shows changes in PM_{2.5}-attributable mortality per 100,000 population (Bondie, 2013). They will make initial observations and inferences of small sections of the map. Then, they will be intellectually careful as they interpret the map key and color scale. Lastly, they will reflect on how their perception of the image changed as they saw more of the image.

Materials Required

- [Zoom In Inquiry Student Sheet](#)
- [Nonattainment: Zoom In Inquiry Slides](#)
- [Legend: Counties Designated "Nonattainment" or "Maintenance"](#) *Note: Teachers color print one legend per group of students. It is recommended that teachers place legend in a plastic sheet protector for reuse.*

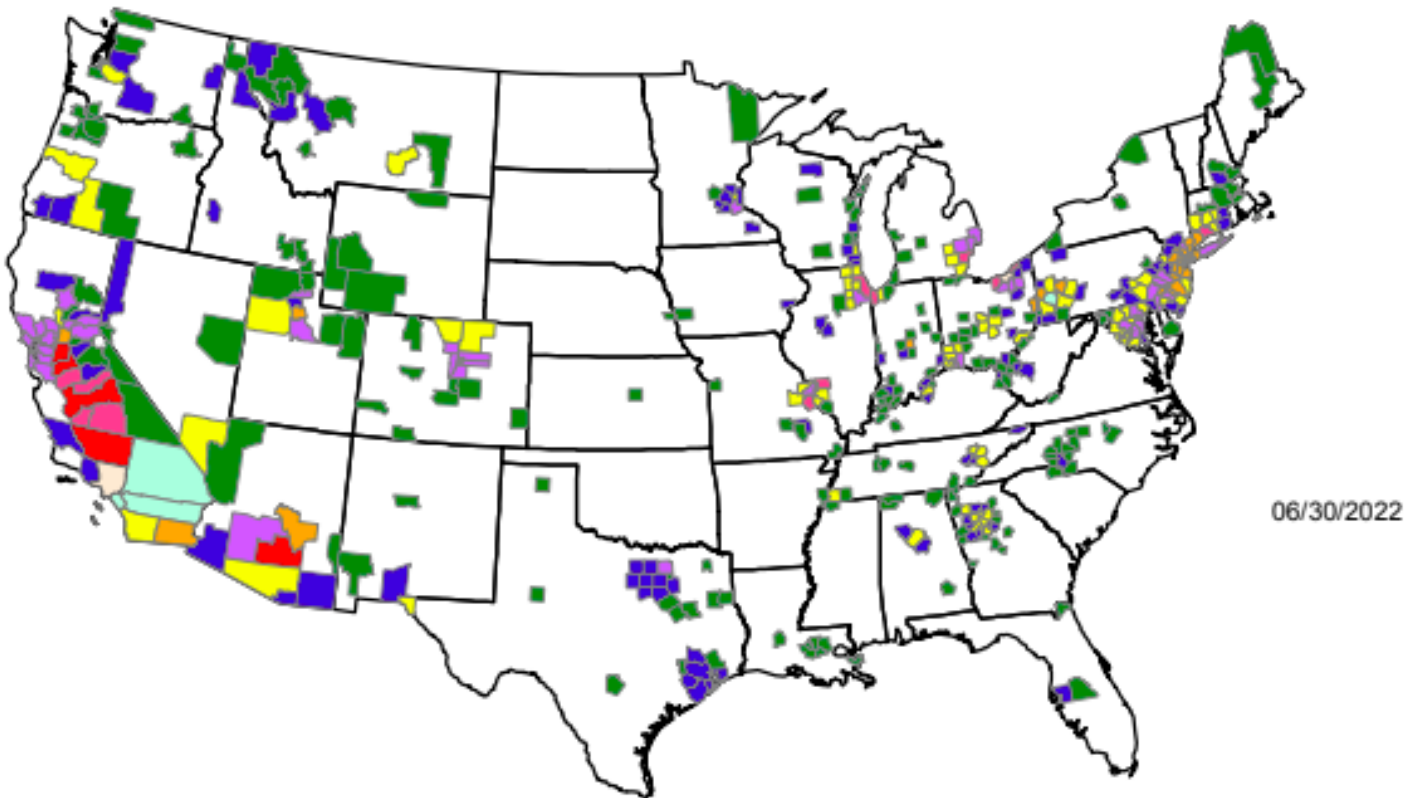
Technology Requirements

- Internet Required
- Teacher computer/projector only
- Color Printer

Teacher Background Information

Use the document [EPA “Nonattainment” or “Maintenance” Counties](#) for teachers to reference or show to students at the end of the lesson.

Procedure



Map of counties designated as “nonattainment” or “maintenance” areas by the Clean Air Act’s National Ambient Air Quality Standards (NAAQS).

Instructions: Display images for the class to observe. With each image, there will be a question. As students observe the images, have them follow the steps below:

1. **Think:** On your “Zoom In Inquiry Student Sheet,” jot down a response to the question that is posted on each slide. (1 min)
2. **Pair:** Talk with a partner about your response to the question that is posted. (1 min.)
 - Respond with follow-up questions:
 - What makes you say that?
3. **Share:** Call on 2-3 students to share out. (1 min.)

Answers:

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.

Sources:

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2. *Boroughs of New York City*. (n.d.). Wikipedia. Retrieved August 12, 2022, from [https://en.wikipedia.org/wiki/Boroughs_of_New_York_City#/media/File:5 B...](https://en.wikipedia.org/wiki/Boroughs_of_New_York_City#/media/File:5_B...)
3. *Counties Designated Nonattainment and Maintenance | Green Book | US EPA*. (2022, July 31). EPA. Retrieved August 12, 2022, from <https://www3.epa.gov/airquality/greenbook/mapnmpoll.html>
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5. *NASA Astrobiology Unveils New Research Coordination Network at AbSciCon 2022*. (2022, May 16). NASA. Retrieved August 12, 2022, from <https://www.nasa.gov/feature/nasa-astrobiology-unveils-new-research-coo...>
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8. *The Plain English Guide to the Clean Air Act*. (n.d.). EPA. Retrieved August 12, 2022, from <https://www.epa.gov/sites/default/files/2015-08/documents/peg.pdf>