
My NASA Data - Interactive Models

Exploring Sky Color and Visibility (slides)

Grade Band

- 3-5
- 6-8
- 9-12

Time

- 30 minutes

Directions

In this lesson, students explore the effect of aerosols on sky color and visibility by using an

Sky Color

☐ Deep Blue



☐ Blue



☐ Light Blue



☐ Pale Blue



☐ Milky



Sky Visibility

☐ Unusually Clear



☐ Clear



☐ Somewhat Hazy



☐ Very Hazy



☐ Extremely Hazy



interactive virtual model in the Google Slide presentation. The simulations model looking through cups of clear water with different amounts of a mystery substance added to them. There are question slides throughout the activity to assess students' understanding.

Student Directions:

1. Your instructor may request that you use the the Google Form to submit the answers. Use the Google Slides for this [interactive simulation](#) in presentation mode until you see the STOP slide. Then, go into *display* or *edit* mode.
2. On Slide 3 click to reveal the background color looking down through each cup. Then, exit presentation mode and continue in *edit* mode.
3. On Slide 6, drag and drop cups with different amounts of the mystery substance to the horizon shown in the picture. Then, evaluate the difference in visibility related to different amounts of the mystery substance.
4. Slides 8 and 9 explain basic information about aerosols and their impacts on sky color and visibility. After reading this information, summarize your findings.
5. Answer the following questions as instructed. There is a [Google Form for Sky Color and](#)

[Visibility](#). There is a [Google Form for Sky Color only](#), and there is a [Google Form for Visibility only](#).

Student Questions:

Sky Color Findings

1. Describe the difference in color in each circle.
2. What patterns do you observe?
3. How does the amount of mystery substance affect the color?
4. Think of the cups as the sky and the color as sky color. How does the amount of mystery substance affect the sky color?
5. Make a prediction. How do you think the amount of mystery substance will affect visibility?

Visibility Findings

1. How did the amount of mystery substance affect visibility?
2. What do you think would happen if we added more of the mystery substance?
3. What could the mystery substance represent?

Summarize Findings

1. What factors affect sky color and visibility?
2. How do they affect sky color and visibility?

Teacher Note

Background information is provided in the Teacher Key.



This virtual lesson is modified from the original Elementary GLOBE Learning Activity [Why \(Not\) So Blue?](#) created by the [UCAR Center for Science Education](#). There is an [activity mat \(poster\) for the original activity](#).

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.

Document Resources

- [GLOBE Elementary Activity: Why \(Not\) So Blue?](#)

Google Slide interactive Files

[Sky Color and Visibility Google Slides](#)

Google Forms Interactive Files

[Sky Color and Visibility Student Response Form](#)