

Tropospheric Ozone

Follow the directions and answer the questions below, using complete sentences, on a separate sheet of paper. Staple this sheet on top of your work.

Go to: <http://www.epa.gov/oar/oaqps/gooduphigh/>

Good Up High

1. How can ozone be both good and bad?
2. What is happening to the “good” ozone layer?
3. How much damage can 1 Chlorine atom do? Explain.
4. How does the “good” ozone protect the Earth?
5. What is being done about ozone depletion?

Bad Nearby

6. What causes “bad” ozone?
7. What are some sources of bad ozone?
8. How does “bad” ozone affect human health and environment?
9. What is being done about “bad” ozone?
10. What can we do/actions can we take to reduce our risks?

Go to: www.epa.gov/airnow/

Ozone – Air Now

In the far right corner- choose “Ozone”- found under Air Quality Basics. Read about good and bad ozone and answer the following questions.

11. Where is the good ozone located and what is its function?
12. What depletes good ozone?
13. Where is the bad ozone located and what creates it? What does NOX and VOC stand for?
14. List three health problems associated with bad ozone. (Hint: You may need to go to Ozone and your Health- How can ground-level ozone affect your health?)
15. Scroll down to the Air Quality Index Color Chart and write down a one-word descriptor of each color code.

Green- Good

Yellow

Orange

Red

Purple

16. After answering this question, go back to Air Now at: www.epa.gov/airnow/
In the far left corner, choose National Overview and then choose Ozone Now. What is the current ozone reading for our area? _____ (use color code)

Review Questions

1. Where is ozone found in the atmosphere? Describe why ozone at higher altitudes is beneficial.
2. How is ozone formed? Describe natural and anthropogenic causes of ozone formation.
3. Why doesn't ozone from different layers in the atmosphere mix?
4. Why is tropospheric ozone considered a pollutant? What types of health problems can it cause?
5. What can be done to mitigate the formation of tropospheric ozone?
6. How do governments in the U.S. (federal, state, or local) monitor ozone and what is the protocol when ozone levels rise to potentially hazardous level?
7. Identify 3 locations in the world (outside of the U.S.) with consistently high levels of tropospheric ozone. What factors contribute to the high concentrations found in those locations? What do the governments (national to local) in those places do to monitor and protect the people that live there?