

Name: \_\_\_\_\_

**APES- Ozone (Good and Bad)**

**DO NOT WRITE ON THIS SHEET- Use a separate piece of paper- write out questions/headings for reference**

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

Go to: [www.epa.gov](http://www.epa.gov) click on homepage and search "ozone good up high"

**Click on: Good Up High**

Answer the following questions in your own words: (On separate piece of paper)

- 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?

**Click on: Bad Nearby**

- 1: What causes “bad” ozone?
- 2: What are some sources of bad ozone?
- 3: How does “bad” ozone affect human health and environment?
- 4: What is being done about “bad” ozone?
- 5: What can we do/actions can we take to reduce our risks?

**Ozone- Air Now**

Go to: [www.epa.gov/airnow/](http://www.epa.gov/airnow/)

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

- 1: Where is the good ozone located and what is its function?
- 2: What depletes good ozone?

3: Where is the bad ozone located and what creates it? What does NOX and VOC stand for?

4: 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?*)

5: Scroll down to the Air Quality Index Color Chart- Write down a one-word descriptor of each color code.

**Green- Good**

**Yellow-**

**Orange-**

**Red-**

**Purple-**

6: After answering this question, go back to **Air Now at: [www.epa.gov/airnow/](http://www.epa.gov/airnow/)**

In the far left corner, choose **National Overview** and then choose **Ozone Now**.

**Or type in your zip code on the right hand corner**

**What is the current ozone reading for our area? \_\_\_\_\_ (use color code)**

**The AQI for Students Go back to Air Now and bottom right hand corner, click on**

**Go to: How Ozone is Formed- <sup>"videos"</sup> Watch the video and take notes.**

**Go to: O<sub>3</sub>- Good Up High, Bad Nearby- Watch the video and take notes.**

**Smog City 2- Save the Smog City from Ozone**

**Go to: [www.smogcity2.org](http://www.smogcity2.org)**

**Instructions:** *Change the settings in “Smog City” and notice the effects that those changes have on the amount of “smog” the city produces and the air quality.*

On your paper, **take notes about what the various condition changes do to the AQI.**

***Which set of conditions produce the best possible scenario for the city?***

***Which set of conditions produce the worst scenario for the people, animals and plants of Smog City?***

**Summary:** On your paper, write a **2-3 paragraph summary** about what you have learned about **ozone, ozone depletion, ozone destruction and air quality** by completing this assignment. **Make sure to use the new vocabulary that you have learned.**