**Air Science Task**

**Prompt: You have read two articles: "What's in the Air?" and "A Thin Blue Veil.” The earth is surrounded by a layer of gases called the atmosphere, and weather takes place in the part of the atmosphere called the troposphere. In a paragraph, write about the layers and gases in the atmosphere, and the weather that takes place in the troposphere. Be sure to cite information from both texts.**

Earth’s atmosphere and gasses help to sustain life, and weather takes place in these. First, the farthest atmospheric layer from Earth is the exosphere, which transitions into outer space. Just before this layer, is the warmer thermosphere, heated by the sun. Next, the mesosphere is actually colder, at almost -90c, followed by the stratosphere. Though near Earth, it contains no moisture or dust and is mostly cold until you reach the ozone layer. The final layer, the troposphere, most closely surrounds Earth. It is only 2% of the depth of the atmosphere, but most dense, containing 80% of the atmosphere’s mass. Next, within these layers of atmosphere, there is an important mixture of nitrogen, oxygen, argon, carbon dioxide, ozone, water vapor and other gases. The most abundant gas is nitrogen, a permanent gas. Oxygen, the second permanent gas, is the next most abundant gas. Both remain constant. Other gases, called variable gases, change depending on changes in the environment. Finally, there are four main types of weather that take place in our troposphere: temperature, humidity, pressure and wind. Temperatures range from 45c to -55c. Just as weather changes, all of the gases mix together in different combinations and each layer of the atmosphere has no actual cut point. The distinctions between the layers of the atmosphere are clearer than the separations between the gases and elements of weather. However, if these mixtures changed too much, we might not survive unless we were able to adapt at a quick enough pace.