Here is a list of all the chemicals we have learned about so far:

- $\text{SO}_2$
- CFC
- VOC
- PM
- $\text{CH}_4$
- Aluminum
- $\text{N}_2$
- Lead
- $\text{N}_2\text{O}$
- $\text{O}_3$
- $\text{CO}_2$
- Smog
- CO
- Magnesium
- Chlorine
- $\text{NO}_x$
- $\text{H}_2\text{O}$
- Calcium
- $\text{O}_2$
- Radon
- Asbestos

**ANSWER THE FOLLOWING QUESTIONS. EACH ANSWER WILL USE TERMS LISTED ABOVE.**

1) List all the pollutants that are put into the air from humans that then start the formation of acid rain:

2) What is mixed with the pollutants in #1 to create acid rain?

3) What air pollutant is mostly found in buildings leftover from humans lining walls and floors with it?

4) Which pollutants are the 5 major greenhouse gases?

5) What pollutant is only able to be formed in the presence of sunlight?

6) What other two pollutants are needed along with the sunlight to create the pollutant you mentioned in #5?

7) What are two major plant nutrients that is washed out of soil away from plants in acid rain?

8) Which element found in the ozone destroying molecule is the main reason why the ozone layer cannot reform and heal itself?

9) What two compounds are the most commonly seen in air in our atmosphere?

10) Name the secondary pollutants on the list.

11) What compound is the most likely to suffocate someone by cutting off the body's supply to oxygen?

12) What compound is the primary air pollutant in air fresheners?
13) What compound is beneficial high in the atmosphere but dangerous in the lower atmosphere?

\[ \text{stratospheric = good} \hspace{1cm} \text{tropospheric = bad} \]

14) What pollutant is a non-dangerous, radioactive gas that degrades into cancer causing forms over time?

radon

15) The most common indoor air pollutant is soot from ovens and stoves. Name the category of air pollutant this would fall into.

PM (particle matter)

16) Which pollutant is responsible for increased exposure of people to ultraviolet light?

CFC (destroys the ozone layer)

17) In normal ozone layer functioning, what compound is formed after ozone is destroyed by UV light?

\[ \text{O}_3 \rightarrow \left[ \text{O}_2 + \text{O} \right] \]

\[ \text{O}_2 \text{ is the item in the list that is formed after ozone destruction.} \]

18) Name the gases involved in increasing temperature on Earth that might have an affiliation to animal waste.

\[ \text{CH}_4 \hspace{1cm} \text{N}_2\text{O} \rightarrow \text{nitrous oxide} \rightarrow \text{from bacterial action of fertilizers} \]

\[ \text{methane} \rightarrow \text{from poop/animal waste} \]

19) Which gas is a non-greenhouse gas and the primary by-product of burning coal?

\[ \text{SO}_2 \hspace{1cm} \text{(coal has high sulfur content)} \]

20) Which of the following air pollutants is primarily from the burning of gasoline and results in brain damage if consumed in large enough amounts?

lead

21) These two pollutants are the two biggest causes of buildings in developed countries to be labeled as having sick-building syndrome.

PM, Radon

22) Which air pollutant results in the inability of hemoglobin to bind oxygen in the blood if exposed to it in large enough quantities?

CO

23) Which greenhouse gas is naturally released from decomposition of materials from within wetland ecosystems?

CH\(_4\)

24) Name the one compound that is completely man-made and entirely from anthropogenic sources.

CFC

25) Name the compound that blocks water uptake in plants that is released from soil in acid rain events.

Aluminum

26) What element is part of lime which is used to neutralize acid precipitation effects in soil and water?

lime is \( \text{CaCO}_3 \)

so Calcium is part of this compound