

# LESSON 8 - AIR POLLUTION

# AIR POLLUTION

Good Old Earth here again. I had an artist friend of mine make this drawing. Why do you think I'm coughing in this picture? *[Give students a chance to respond.] What is the person who draws the pictures for a story (or in this case, a read-aloud) called? (an illustrator)*



# AIR POLLUTION

Of course, I don't really need to breathe, not like you people and animals do. And I don't actually cough, either. Sometimes, though, I do wish that I could cough just to get rid of some of the air pollution that has collected in the skies.



# AIR POLLUTION

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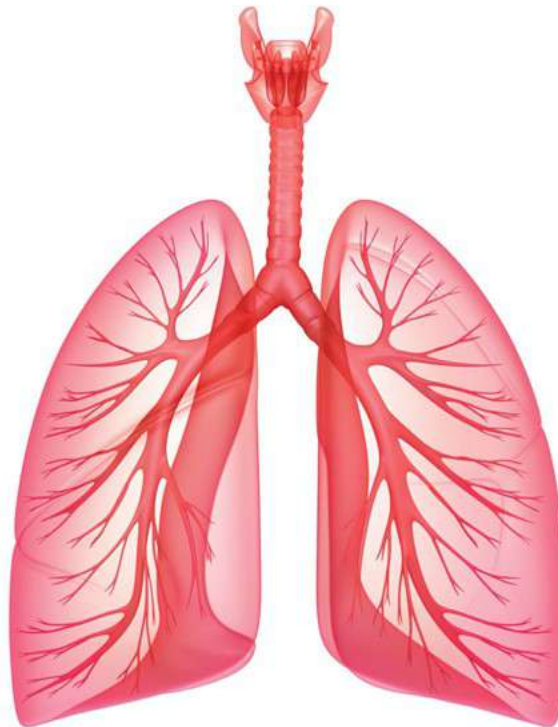


# AIR POLLUTION

*What part of the body is this?*

Air pollution can cause health problems for people. You have lungs inside your chest. This illustration shows you what lungs look like. Each time you inhale, or breathe in, your lungs fill up with air, like balloons. When you breathe out, or exhale, the air leaves your lungs.

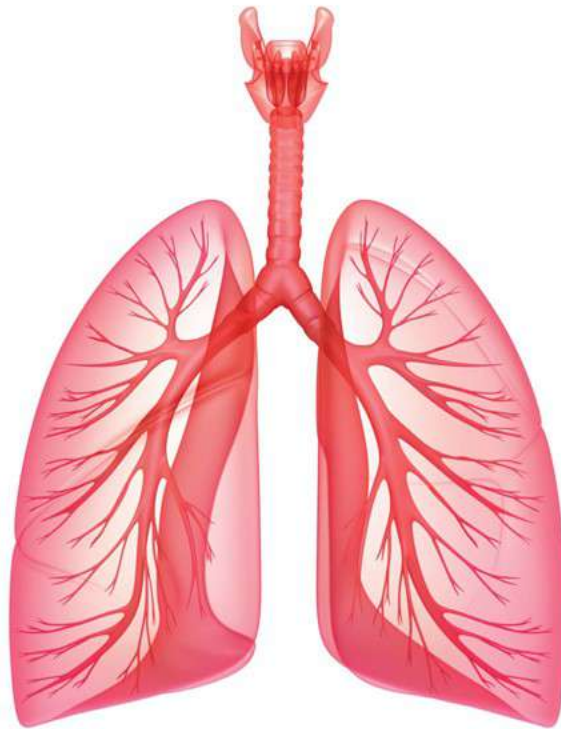
*[Ask students to put their hands on their chests as they inhale and exhale, so that they can feel their lungs expand and deflate.]*





# AIR POLLUTION

If there is pollution in the air you breathe, then each time you inhale, that pollution enters your lungs. Over time, this can cause health problems. The more polluted the air, the more pollution you breathe in. And the fact is, dirty, polluted air is bad for people's lungs and can make them sick.



# AIR POLLUTION

Here's a picture of a big American city. Let's take a close look at it. If you look at the background, where there are large buildings, you can see that the air looks kind of foggy and clouded. Look even closer, beyond the city, and you can see a thin brownish-yellow strip of air, just below the light-blue sky. That's air pollution, or smog, which floats over the top of the city.





# AIR POLLUTION

Air pollution creates global problems. That means that smog and other forms of air pollution can cause problems all over Earth, or, as some people call me, the globe. In other words, the places that create a lot of air pollution, such as big cities with lots of cars and factories, are not the only places that are harmed, or hurt, by air pollution. Air pollution is carried by the wind to other places. It also floats up high into the atmosphere, higher than the highest airplanes. But it doesn't float off into space. Instead, it collects up in the sky.





# AIR POLLUTION

Luckily, there is a lot that you can do in your home, school, and town to help solve the problem of air pollution. And here comes another big 'R' word: responsibility. That's right, if people want to make sure that the air is clean, then it's their responsibility to learn how they can help. *What is a responsibility?*



# AIR POLLUTION

One of the most amazing things about people is that you have figured out how to make and use electricity. You use it for so many things, including light bulbs, which you turn on and off with light switches. Televisions, refrigerators, air conditioners, computers, and so much more, are also plugged into electrical outlets. *[Point to the electrical outlet in the picture.]*



# AIR POLLUTION

You might have heard that too much television is bad for your brain, but I bet you didn't know that it's bad for the air, too! Why? Because when you watch TV, you use electricity, and using electricity can add to air pollution, even though you can't see anything going into the air.





# AIR POLLUTION

What do you see in this picture? *[Pause for students to respond.]* First of all, it's a really long train. What is the train carrying? It's carrying one of the most important natural resources in the world—coal. *Do you remember that we learned about mining coal when we read about blacksmiths?* Coal is a type of rock that people dig up out of the earth. In some places, people burn coal to produce, or make, energy.





# AIR POLLUTION

Energy from burning coal can be used to make electricity. This is a picture of a coal-fired power plant. *A coal-fired power plant is a factory that uses coal to make electricity.* But coal-fired power plants can generate large amounts of air pollution.



# AIR POLLUTION

Do you see the electrical lines running out from this plant in the lower right corner of the picture? *[If possible, tell students what type of power is used in your community.]* Every time someone turns on a light, a computer, or any other electrical appliance *or household machine*, there's a chance that the electricity is coming from a power plant like this one and, as a result, a little more pollution is added to the air. But, when you turn off the lights, you do not add any pollution. It's a simple thing everyone can do to help reduce air pollution! *So when you leave the room for a while, what should you do on your way out?*



# AIR POLLUTION

Do you know what this is? *[Pause for students to respond.]* This is the tailpipe of a car. And it is another big cause of air pollution. Every time someone starts a car, that car lets air pollution out of the engine through the tailpipe. The pollution that comes out of the tailpipe is called exhaust.

So, what exactly is car exhaust, and how does it pollute the air?





# AIR POLLUTION

What's this person doing? *[Pause for students to respond.]* He's pumping gas into his car at a gas station. Gasoline is extremely useful. People use it in their cars, trucks, buses, boats, airplanes, and lawn mowers. Every day, people around the world use millions and millions of gallons of gasoline.



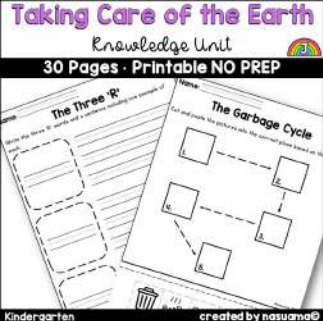


# AIR POLLUTION

A car's engine burns gasoline, which gives it power. When a driver "steps on the gas," he or she presses down the gas pedal, which is on the floor of the car. That sends more gasoline to the car engine and makes the car go. But, when gasoline burns—like coal—it creates air pollution. With millions of cars driving around letting out exhaust, the pollution really starts to add up. The more cars, and the bigger those cars are, the more air pollution they create.

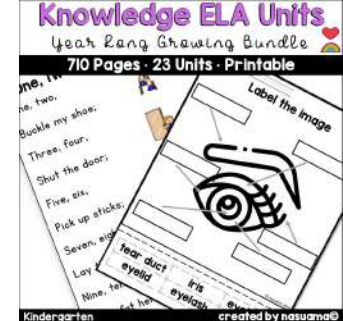
That's why it's always a good idea to walk, ride your bike, or take the bus when you can. All this helps reduce the amount of air pollution.





# TAKING CARE OF THE EARTH


BUNDLE



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

## Air Pollution

Write the three things that contribute to air pollution and a sentence about each.



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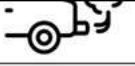
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DO YOU NEED EXTRA ACTIVITIES?



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