



## Teacher's Notes: Air Pollution

### Learning Objectives:

- The students will be able to identify a car, exhaust, factory, smoke.
- The students will be able to define the following: exhaust, pollution, air pollution, factories
- The students will be able to explain what causes air pollution.
- The students will be able to read the following words: soil, air, water, rocks.
- The students will be able to explain where smoke comes from.
- The students will be able to explain what has an exhaust.

### Activities

1. Air quality experiment [Crafts for Kids: DIY Air Quality Experiment \(aprilaire.com\)](https://www.aprilaire.com)
2. Get a collection of magazines. Have students look for pictures of different things that cause air pollution (fires, smoke, car and plane exhausts, etc. ). Depending on group you could use the pictures for different things:
  - Everyone glues their picture on one big poster board.
  - Students make their own collage of natural resources
  - Students write a sentence describing each natural resource.
3. Students do image searches using the technology printable. Have the students save pictures of their favorite ones. Those are then inserted onto a Word document or a PowerPoint. Students can type a word or sentence describing each natural resource.

**General Tips:** The goal is to build background knowledge while leading an engaging discussion on any and all information that can be talked about on a given page. The items that you choose to bring up or focus on should be modified for the students you are working with. For example, if you have a student who can point to something in the picture, answer yes/no questions be sure to incorporate a lot more of that as you go through the book. On the same token, be sure to ask a lot of comprehension questions and critical thinking questions at the level appropriate for students. There is something for everyone.

**Page 1:** Pollution means that something in the world is dirty. It can be water pollution, where the water is dirty, it can be the land that has chemicals or something in it that makes it so plants can't grow. When the air is dirty, it is called air pollution. This book is about dirty air, air pollution. **WH Questions:** What is pollution? What is dirty air, land, or water called? **Yes/No** Does pollution mean clean? Is pollution good? Is pollution dirty?

**Point:** water, plastic bottles, turtle, ground **Opinions/Experiences:** Have you seen garbage on the ground? Why do you think people throw things on the ground? **Peer to Peer Interaction:** After you read Page 1, ask students, "What is dirty air, land, and water called?" The answer is the main idea card

“pollution.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

**Page 2:** This book is about air pollution. Look at the picture you can see the air getting dirty. Look at the smoke. **WH Questions:** What do you see that is making the air dirty? What is in the air? **Yes/No:** Does smoke make the air dirty? **Point-** factory, smoke in the air, **Opinion/Experiences** have you seen smoke coming out of chimneys before? **Peer to Peer Interaction:** After you read Page 2, ask students, “What is dirty air called?” The answer is the main idea card “air pollution” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

**Page 3:** Air is all around us. We breathe in air. Plants and animals need air to live. Air is invisible. You cannot see air. Smoke comes out of the back of your car. It is called exhaust. Exhaust is bad for the air. Have students view the following video. Pause periodically to point and discuss. [White Smoke Coming Out of Exhaust - YouTube](#) **WH Questions:** What do people need to live? Who needs air to live? What comes out of cars? Where does exhaust go? **Yes/No:** Is exhaust in the air good? Does exhaust come out of a car? Does exhaust come out of grass? **Opinion/Experiences:** Do you ride in a car? What happens to the air when you ride in a car? **Peer to Peer Interaction:** After you read Page 3, ask students, “What does exhaust come out of?” The answer is the main idea card “cars.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

**Page 4:** Exhaust comes out of airplanes too. Exhaust comes out of cars and airplanes. The exhaust is bad for the air. It makes the air dirty. Exhaust causes air pollution. Have students view the following video showing smoke coming out of airplane exhausts. Pause periodically to point and discuss. [Why Jets Leave White Trails In The Sky - YouTube](#)

**Point:** airplane, exhaust **WH Questions:** What comes out of airplanes? What does exhaust make dirty? **Yes/No:** Do airplanes cause air pollution? **Opinion/Experiences:** Have you traveled on an airplane before? Where can people go on an airplane? **Peer to Peer Interaction:** After you read Page 4, ask students, “What flies in the air and gives off exhaust?” The answer is the main idea card “airplane” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

**Page 5:** Another way that air gets dirty is smoke. Smoke comes out of chimneys. Factories have a lot of smoke coming out of them. People make things in a factory. Paper is made in a factory, soda is made in a factory, the cans for soda are made in factories. Factories pollute the air with their smoke. Have students view the following video showing smoke coming out of factories. Pause periodically to point and discuss. [China Aerials: Industrial Lands, Factories, Exhaust Gas, Pollution in China - YouTube](#) **Point:** factory, smoke, chimney **WH Questions:** What causes air pollution? **Yes/No** Is smoke pollution? Is smoke good for the air? Does smoke come out of factories? **Opinion/Experiences:** What is something that is made in a factory? **Peer to Peer Interaction:** After you read Page 5, ask students, “What causes

air pollution?” The answer is the main idea card “factories.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk to their partner about factories and pollution.

**Page 6:** Another thing that causes air pollution is forest fires. When a forest burns a lot of smoke goes into the air. Have the students view the following video showing smoke from fires. Pause periodically to point and discuss. [Raw: Forest Fires Shroud Quito In Smoke - YouTube](#)

**Point:** forest, fire, flame, smoke **WH Questions:** What causes smoke? What is a forest fire? **Yes/No:** Do forest fires cause air pollution? Is smoke good for the air? Is smoke bad for the air? **Point:** trees, fire, smoke **Opinion/Experiences:** Why do forests catch on fire? Have you seen a fire before? **Peer to Peer Interaction:** After you read Page 6, ask students, “What causes smoke in the forest?” The answer is the main idea card “forest fires.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

**Page 7** When there is a windy day, the wind causes dust to blow around. The dust is air pollution. **WH Questions:** What causes dusty air? What causes air pollution? Have students view the following video showing a dust from a windstorm in Phoenix, Arizona. Pause periodically to point and discuss. [Massive dust storm hits Phoenix - YouTube](#) **Yes/No** Does a windstorm cause dust to blow? Is dusty air good for the air? Does dusty air cause air pollution? **Opinion/Experiences:** What happens when it is windy? Have you been outside when it was windy? **Peer to Peer Interaction:** After you read Page 7, ask students, “What causes dusty air?” The answer is the main idea card “windstorm.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

**Page 8:** We do not want air pollution because it is not good for our lungs. When we breathe dirty air it can make us sick. It can make people cough. Can you cough? **Point:** face masks **WH Questions:** why do they have face masks on? **Yes/No:** Is air pollution good? Is air pollution bad? Can air pollution make you cough? **Opinion/Experiences:** Have you ever coughed when the air had smoke in it? **Peer to Peer Interaction:** After you read Page 8, ask students, “what happens to people when there is air pollution?” The answer is the main idea card “breathe.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

**Page 9:** Air pollution is a problem. We do not want the air to be dirty. We need clean air. We want clean air when we breathe. Have students view the following video about air pollution. Pause periodically to point and discuss. [What is Air Pollution -Video for kids - YouTube](#)

**Point:** air, breathing, nose **WH Questions:** What kind of air do we need? **Yes/No:** Is dirty air good to breathe? Is clean air good to breathe? **Opinion/Experiences:** How can people make sure air is clean? **Peer to Peer Interaction:** After you read Page 9, ask students, “What do people, animals and plants all need to stay alive?” The answer is the main idea card “natural resources.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.