Air Pollution

Scholastic Go! Article - Air Pollution



Air Pollution

We live in a big blanket of air. We can't see it, but air gives us oxygen to breathe. It gives plants the air they need too. Most living things on Earth need this air to live. But sometimes, the air can get dirty and bad for us.

When the air gets too dirty, we call it "polluted." Dirty air has tiny bits of bad stuff in it. These can be very small pieces of things or gases we can't see. When we breathe dirty air, the bad stuff can get into our bodies. It can also make water, dirt, and animals dirty.

What Makes Air Dirty?

Sometimes nature makes the air dirty. This can happen from fires, volcanoes, or big dust storms. But people make the air dirty too. In fact, people make the air dirty more than anything else.

There are two main types of dirty air. One is gases, and the other is tiny bits of stuff. We make dirty gases when we burn oil, gas, and coal. We also make them when we make some chemicals. The tiny bits come from smoke from cars and factories. They also come from things like tires wearing down. When people smoke cigarettes, it makes both dirty gases and tiny bits.

The weather can make dirty air worse. Usually, warm air goes up and takes the dirty air with it. But sometimes, warm air can trap the dirty air close to the ground. This makes the air very dirty in some cities.

Why Dirty Air is Bad

Dirty air costs a lot of money to clean up. It hurts plants and trees. It makes animals sick. It can even damage buildings. But the worst thing is that it hurts people. Dirty air can make our eyes and throats hurt. It can make it hard to breathe. It can make us very sick.

Some kinds of dirty air change the weather all over the world. When we burn oil, gas, and coal, we make gases that act like a blanket around the Earth. This makes the Earth get warmer.

Some things that make the air dirty are made only by people. One example is a gas used in refrigerators and spray cans. This gas hurts a special layer of air high up that protects us from the sun's harmful rays.

Dirty air can also make rain become acidic. This acid rain harms forests, lakes, and buildings.

How We Can Clean the Air

People who study dirty air say there are three ways to make it better:

- 1. Stop making so much dirty air
- 2. Spread out the dirty air so it's not all in one place
- 3. Catch the dirty stuff before it gets into the air

Most countries have rules about dirty air. But not all countries have the same rules. Dirty air can travel very far, even to other countries.

In 1970, the United States made a law called the Clean Air Act. This law says how much dirty air things like cars and factories can make. But it's hard to follow all the rules.

People are finding ways to make the air cleaner. For example, some factories now burn coal that doesn't make as much dirty air. Most cars now have special parts that make less dirty air come out.

People are still trying to find more ways to clean the air. They use special places to watch the air and see how dirty it is. These places are in Hawaii, California, Alaska, and other parts of the world.

It costs a lot of money to clean the air. But having clean air makes the world healthier and more beautiful for everyone.

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Land Pollution

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Land Pollution

Land pollution means making the ground dirty or bad. This can happen in different ways. Sometimes the soil washes away. Other times, bad stuff gets into the dirt. The dirt is important because plants grow in it. We need to keep the dirt clean and good.

Why Dirt is Important

Dirt helps grow food. It's also where many little animals live. We need to take care of the dirt. If the dirt is bad, it can make our water and air dirty too.

How Land Gets Polluted

Wind and Water

Sometimes wind or water can move dirt away. This is called erosion. When this happens, it's harder for plants to grow. The moved dirt can also make rivers and lakes dirty.

Bad Things in the Dirt

People sometimes put bad things in the dirt. These can be chemicals from farms or factories. They can hurt plants and animals. Sometimes old things we don't use anymore, like lead from old paint, can still make the dirt dirty.

Farming

Farmers put special things on plants to help them grow. But sometimes these can be bad for the dirt if too much is used.

Mining

When people dig in the ground for coal or other things, it can hurt the land. It can make the dirt very different and hard for plants to grow.

How to Fix Land Pollution

People are trying to fix land pollution in many ways. They try to stop dirt from washing away. They also try to use less bad stuff on farms. There are rules to stop factories from making the land dirty.

Cleaning Dirty Dirt

It's hard to clean dirty dirt, but people are learning how. Sometimes they take the dirt away to clean it. Other times, they clean it right where it is. It's better to stop the dirt from getting dirty in the first place.

In the United States, we're getting better at keeping our land clean. But in some other places, it's still a big problem. We all need to work together to keep our land clean and healthy.

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Water Pollution

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Polluted Water

Water that looks clean can still be dirty. Nature helps clean water a little bit. Dirt can catch bad things in water. Tiny living things called bacteria can also clean water. The sun helps too.

But people put too many bad things in water. This makes the water very dirty. Dirty water can hurt animals and make our drinking water bad. We need to stop water from getting dirty. There are different ways water gets dirty.

Dirty Water on Top

A long time ago, people built big buildings called factories near rivers. The factories took clean water from the rivers. Then they put dirty water back in. They also put trash in the rivers. Towns put their trash in rivers too.

But people drank water from these rivers! As the rivers got dirtier, people had to build special places to clean the water. It got harder to clean the water because there were more bad things in it.

People who study animals saw that dirty water was hurting them. Fish and other animals that live in water got sick first. Hot water from some buildings made the animals sick too. Cutting down trees made dirt fall into rivers. Animals started to go away from rivers and lakes.

Dirty Water Underground

Most of the world's water is under the ground. We get this water from holes called wells. Rain and snow make more of this water.

Tiny living things in dirt help clean this water. But some very bad things in the water don't go away. These bad things can move far in the water under the ground. They can make drinking water bad, even far away from where the bad things came from. We now know this can make people very sick.

Dirty Oceans

Oceans are very big. But even they are getting too dirty. Dirty oceans make sea animals sick. Fish from dirty water can make people sick if they eat them. Water by the beach can be unsafe for swimming.

Where Does the Dirt Come From?

There are many ways water gets dirty. Some are worse than others.

Bad Things from Factories and Mines

Every day, dirty water comes out of factories and mines. Some of it is a little bit clean. But a lot of it has very bad things in it. People who study this think there are more than a million kinds of bad things from factories going into water.

A very bad thing is called mercury. It can hurt people's brains if they drink water with mercury or eat fish from that water. Another very bad thing is called dioxin. Even a tiny bit can make water unsafe to drink.

People are trying to find ways to make less dirty water from factories. Some ways change the bad things into safe things. Other ways use the bad things again instead of throwing them away. Some bad things need to be put in special boxes that don't leak.

Hot Water

Some big buildings put a lot of hot water into rivers and lakes. This makes the water too warm. The warm water can hurt fish and other animals that live there.

The warm water can also make tiny plants called algae grow too much. These tiny plants take away the air in the water that fish need to breathe. This can kill the fish and other animals.

Acid Rain

Wind can blow dirty air very far. When it rains or snows, the dirt in the air falls down. This makes acid rain. Acid rain has bad things from factories in it. When it falls, it makes lakes and rivers dirty.

Oil Spills

Most of the world's oil moves on big boats across oceans. Sometimes, these boats have accidents or leak. This makes oil spills. One oil spill can kill millions of birds, fish, and sea animals. Oil can also spill from places where people drill for oil in the ocean. A very big oil spill happened in 2010 in a place called the Gulf of Mexico. It was one of the worst ever.

People in boats can make small oil spills too. Some people put old car oil in drains. This oil can end up in lakes and rivers. Even small oil spills can hurt animals.

People are trying to stop oil spills in the ocean. They are also trying to find ways to clean up spills faster.

Bad Things from Farms

Most big farms use things that can be bad for water. They use stuff to help plants grow and stuff to kill bugs. Rain can wash these into rivers and lakes. The plant food can make too many tiny plants grow in the water. The bug killer can make animals and people sick. People are trying to make safer ways to grow food.

Toilet Water

Everything we flush down our toilets and sinks is called sewage. It has bad things and tiny living things that can make us sick. Most big towns have special places to clean this water before it goes into rivers or lakes. Some new places can clean the water so well you could drink it!

Radioactive Stuff

Places that make power from special rocks called uranium make very dangerous trash. This trash can make animals very sick. It can also make people very sick with a bad illness called cancer. It's very important to keep this stuff out of our water. There are rules to keep these places safe. People are working to make them even safer.

Fighting Dirty Water

Groups of people work to make rules to stop water from getting dirty. In 1972, the United States made a rule called the Clean Water Act. This rule and others like it say what bad things can't go in water. They also pay for places to clean dirty water. Because of these rules, many rivers and lakes in the United States are much cleaner now than they were 50 years ago. Now, people all over the world are working together to keep water clean for the future.

Can you think of ways to help keep water clean? What do you do at home or school to save water?

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