

Grades K-5**Mini-Lesson: “What do garbage trucks do with garbage?”**

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Doug! It sounds a little funny to say it but garbage trucks are surprisingly interesting. There are actually different kinds of them, like side loaders, front loaders—there are even drivable garbage trucks for young kids. Someone named Miles has a question about garbage. Let's give Miles a call now.

[Video Call]

- Hi, Doug!

- Hi, Miles!

- I have a question for you. What do garbage trucks do with garbage?

- Ooh, that's a great question.

Have you ever watched the garbage being picked up? I don't know about you, but even as an adult, I still get excited about watching it. It can almost seem like magic, doesn't it? Think about it. You drop a piece of trash in the garbage bin. The garbage truck picks it up and poof, the garbage disappears. But garbage isn't magical. It has to go somewhere. But where? Now, some of you may already know that a lot of our garbage goes to a dump or landfill, but what do you think happens to our garbage once it gets there?

VIDEO 2

As long as there have been humans, there has been garbage, and figuring out what to do with our garbage is a problem we've had to tackle for thousands of years. In the ancient city of Ur, garbage was a huge problem. Trash would pile up on streets or in giant mounds. Sometimes, rats and flies would live in the garbage and spread diseases. Oh, and on top of all of that, it smelled awful. Many years later in the United States, people used to dump tons of garbage in the ocean, thinking that it would all just sink to the bottom. At least at first, they had no idea how harmful garbage could be to ocean animals that could mistake it for food or get tangled up in it. And get this, a lot of that garbage floated back to places where people were swimming. So gross. Luckily, in the time since those days, scientists and inventors have come up with better ways to deal with garbage. One of those ways is to bury it. That is what we do with most of our garbage. Garbage trucks take our garbage to the place we call the landfill, where it's dumped out, flattened by a bulldozer, and then buried with dirt. Once the trash is buried, more garbage is dumped. Then more dirt, then more garbage. Until pretty soon it piles up into a tiny garbage mountain. When the last layer of dirt is poured, trees and grass are planted and the landfill can be turned into something new, like a park or a sports field. But landfills aren't perfect. Like so many solutions to problems, there are some things they don't solve. They can still be stinky and ugly and not a lot of people want to live by them. Plus, if all that garbage isn't buried right, rainwater can mix with the garbage, causing a gooey substance called leachate to form. Unless we find ways to stop it, leachate can sink into the drinking water we get from the ground. And that's not the only problem. When garbage rots, it creates an invisible gas called methane, which isn't good for the air we breathe. But there are some solutions to this. We don't need to bury all our garbage. Some garbage can actually be used. For example, garbage that comes

from living things, like food and wood, can be taken to compost centers, where it's smashed down and becomes fertilizer which can be sprinkled on farms and gardens to help plants grow. And notice the lights in your house or classroom? Believe it or not, they may be powered by garbage. You see, some of our garbage is burned in a machine called an incinerator. The heat from the fire can be used to make electricity to power things like lights and computers. Now, you may or may not have heard about composting or about incinerators before, but I'm sure you've heard of recycling. You probably have a recycling bin at home and at school. Well, that's another way that garbage can be used again. All the garbage you put in a recycling bin is picked up by a special recycling truck and taken to a place where it's cleaned, melted, and turned into something entirely new. Like, check out these toothbrushes. The handles were actually made from recycled yogurt cups. And believe it or not, this slide has been made with the plastic from old milk jugs. Now, none of these ways of dealing with garbage is perfect. Burying trash in landfills or burning it to make electricity is helpful, but it can also pollute the soil and air. And recycling is great, but what about all the trash that can't easily be recycled? That's why scientists and inventors are constantly trying to come up with better and cleaner ways to deal with garbage, like lining the bottom of landfills with a thick plastic shield so leachate doesn't leak into our water, or catching the methane gas that rotting garbage makes and using it as fuel to power garbage trucks. Some inventors are even working on ways to get rid of some types of garbage altogether. You see these spoons? Instead of throwing them away, you can eat them. But finding better ways to get rid of our garbage isn't just a challenge for scientists and inventors. When it comes to garbage, anyone can help. You can reuse or donate clothes or toys that you don't want to keep anymore. You can toss paper, soda cans, and plastic containers into recycling bins. Or better yet, you can pack garbage-free lunches by using reusable containers and reusable water bottles instead of packages and bottles that have to get recycled or thrown

away. So in summary, the problem of where to put our garbage is a problem we've always had to deal with, and probably always will. While we can't just make our garbage disappear, we can keep finding ways to make it safer, less smelly, and just create less of it. That's all for this week's question. Thanks, Miles, for asking it!