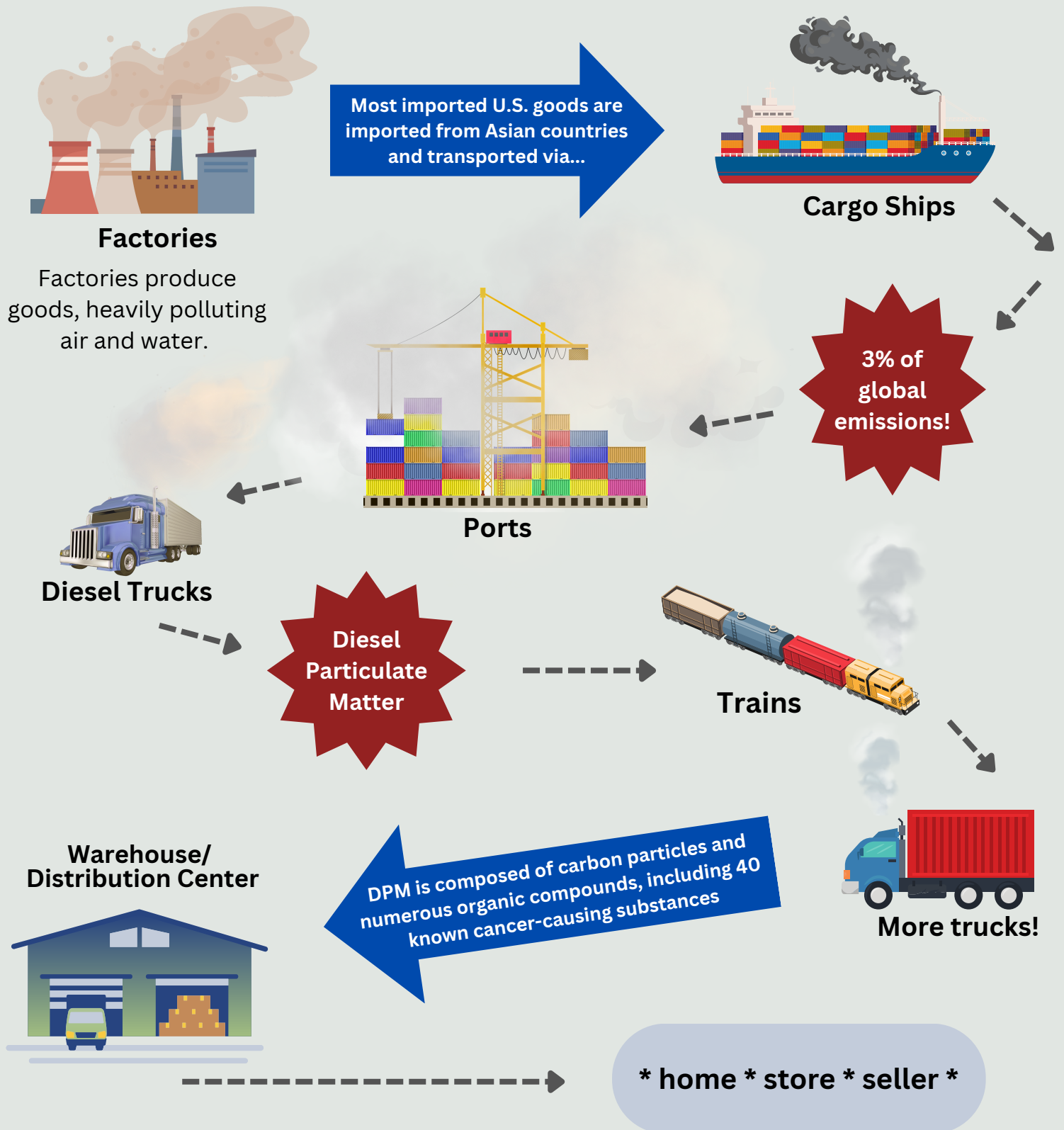


# GOODS MOVEMENT

How do we get the things we need?



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## Factories

Goods are produced in factories that **heavily pollute air and water**. Most U.S. goods are imported from Asian countries.



## Cargo Ships

From factories, goods go to ports, are loaded onto cargo ships, and transported over oceans. Cargo ships use **bunker fuel**, which is among the **dirtiest fuels**.



## Ports

At the destination port, cargo ships idle **significant exhaust**. This exhaust creates harmful pollution for port communities.



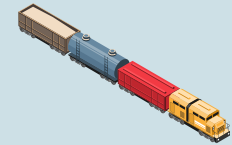
## Cargo Container

Port workers, using mostly **diesel equipment**, unload containers and transfer them to mostly **diesel trucks**.



## Diesel Trucks

Mostly **diesel trucks** transport containers to distribution centers, local rail yards, or far-away destinations.



## Trains

**Diesel-powered trains** transport goods in containers across the country, creating not only **diesel pollution**, but also noise and light.



## More trucks!

In railyards, goods are transferred to mostly **diesel trucks**. These trucks transport goods to warehouses and distribution centers.



## Warehouse/ Distribution Center

Goods are unloaded, organized, and prepared for their final destination.



## Final Destination

Packages are **delivered to homes**. Goods are moved to **department, furniture, electronic, grocery stores**, and more.

# ADVERSE EFFECTS OF GOODS MOVEMENT



## What to know

Movement of goods creates significant amounts of **Diesel Particulate Matter (DPM)** pollution and other **Traffic Related Air Pollution (TRAP)**.



DPM contains hundred of different chemicals, including **40 known cancer-causing** organic substances.



DPM **penetrates deep into the lungs** and can contribute to health problems including:

- Eye, nose, and throat irritation
- Heart and lung disease
- Asthma
- Lung cancer
- Prenatal and postnatal risks and complications



## Twin Ports and the I-710 Corridor Community Impact of the Los Angeles and Long Beach Ports and the I-710 communities

- Twin ports of Los Angeles and Long Beach are the **largest ports in the country**.
- **40% of U.S. imports** enter through the twin ports and are transported by trucks and trains throughout the country.
- The ports operate **24 hours a day, seven days a week**.
- **50,000 diesel-fueled freight trucks** travel the I-710 each day.
- Some of the worst air quality in the United States
- Port traffic expected to triple between 2012 and 2035.

*"710 freeway is the main artery for the nation's largest port complex, through which nearly a third of the nation's goods are moved."*

LA Times

*"Diesel emissions account for 70% of total cancer risk from air pollution, and areas around ports and truck congested freeways are most impacted."*

South Coast Air Management district

*"For every 10 grams of fine particulate air pollution, there is a 4% increase in all causes of mortality."*

Diesel Death Zone

# Child Development and Pollution

## Traffic Related Air Pollution contributes to poor health outcomes in children

- Air Pollution contributes to **600,000 worldwide deaths** among children under five-years old.
- Infants and children are most vulnerable to many adverse effects of pollution due to **rapid development of brains, lungs, and immune system.**
  - Children crawl close to the ground and have more **contact with dust and dirt** from being physically active and spending time outdoors.
  - More likely to **put hands in mouth.**
  - **Breathe more** than adults relative to body mass.
- TRAP is associated with an **increased risk of asthma, lower lung function, and lower and upper respiratory infections.**
- TRAP exposure may **lead to negative long-term impacts on lung development**, increased **Body Mass Index**, and development of **disease later in life.**



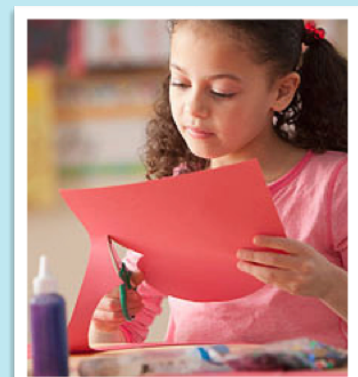
## Prenatal exposures to pollution have been linked to adverse cognitive and behavior outcomes

Prenatal exposure to air pollution can have negative effects on cognitive development and behavior in children

- Increased likelihood of **developmental delays** at 3 years of age.
- **Lower IQ scores** at age 5.
- **Slower processing speeds**, increased **behavioral problems**, and increased **ADHD symptoms** at ages 7-9.
- **Increased behavioral problems** associated with **ADHD** at age 9.

## CHILDREN NEAR FREEWAYS

- Studies show that children who live closer to freeways had decreased lung function and may experience adverse developmental effects.
- Children who live, attend school, or play near major roads or freeways are more susceptible to asthma.





¡Nos emociona  
muchísimo que estés  
aquí!  
We are thrilled to  
have you!

## Por un Cielito Lindo: Activity Handout

Now that we have learned about pollution's negative impact on our communities, we want to invite you (and your friends!) to do an activity that represents your thoughts, feelings, and concerns about the environmental issues within your community.

### **SOMETHING TO THINK ABOUT**

What are the adverse effects of pollution in your community?

How are you affected by it?



**Raise your voice. Be aware. Make an impact!**

Let's make a project! Use your creativity to share your thoughts and feelings about the poor air quality in your neighborhood. You can post photos, make a drawing, or write a scene to raise awareness about this issue and encourage others to take action. You can also ask your teachers how you can reach out to local government officials to advocate for change and work towards improving the air quality in your community.

**YOU DESERVE BETTER!**  
**Ready? Here we GO!**



**1**

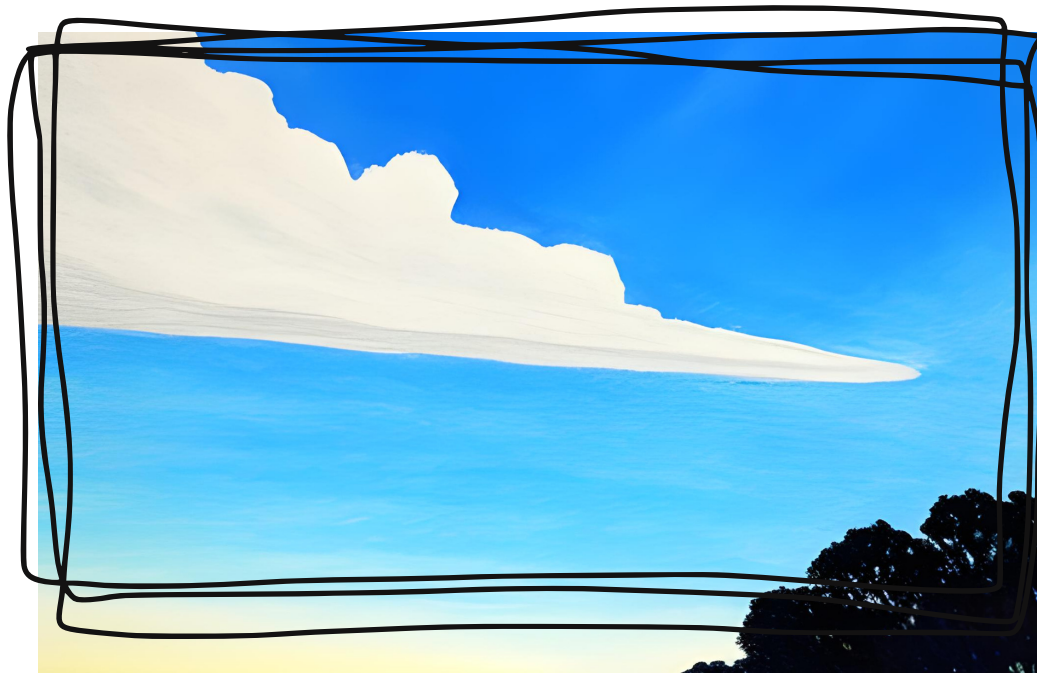
**MAKE A DRAWING!**  
Show us what pollution means to you.

What does it look like?  
How does it make you feel?  
What ideas do you propose to help your community?

Here are a few examples to inspire you:

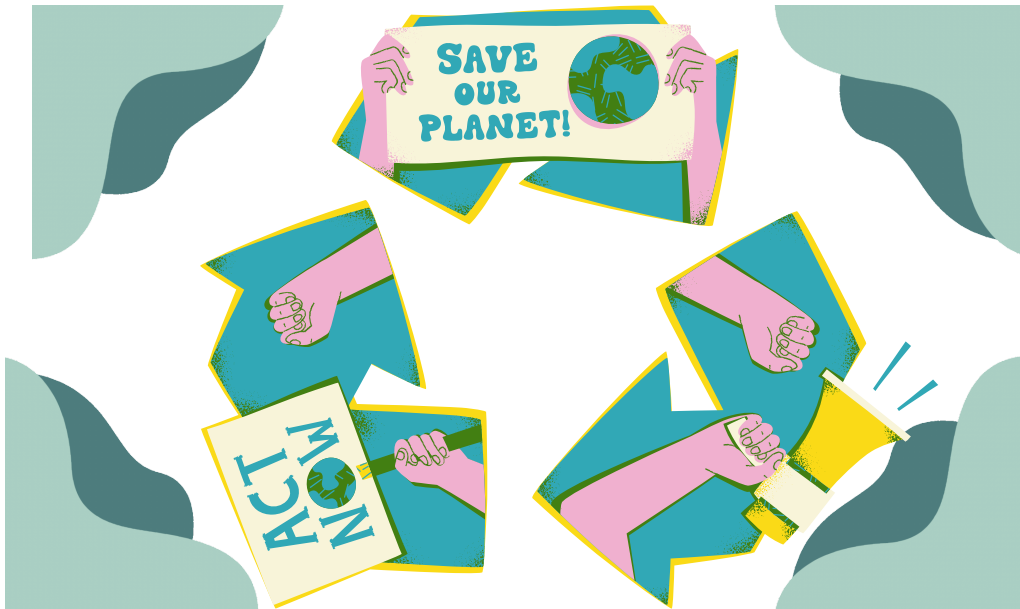
**Name:** *Anita Reyes.*

**"I wish that the sky in my community looked like the one in my drawing."  
"Unfortunately, many trucks are driving by daily, polluting the air. I think the authorities should mandate that these trucks switch to 'ZERO-POLLUTION' emission technology."**



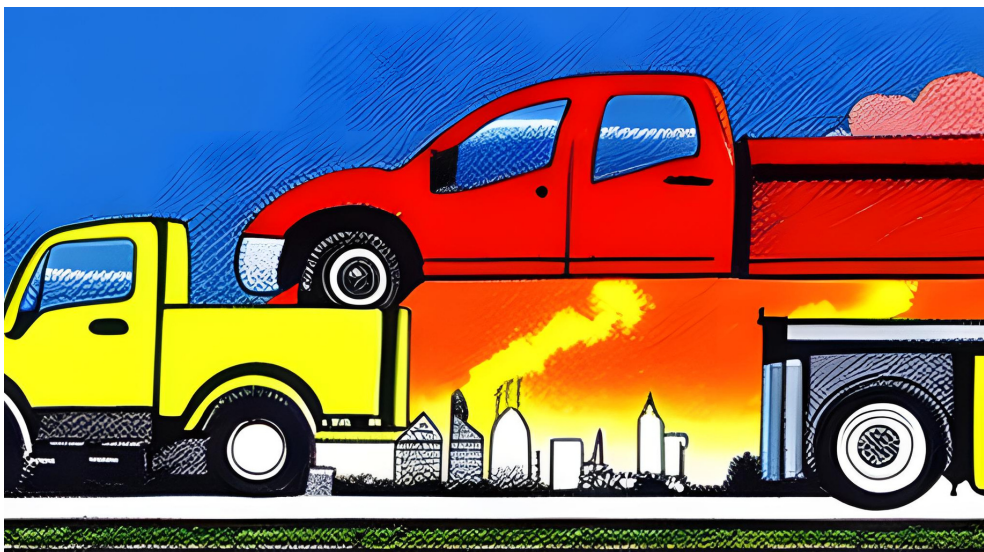
Name: *Violeta Salas*

"We need to do something; I propose we get together and hold our government accountable."



Name: *Pablo Medina*

I love trucks; I really do. I want to buy one when I grow up. I'll make sure my truck is eco-friendly to help reduce pollution!



# 2

## MAKE A STORYBOARD!



Draw your story and tell us all about it!

We want to know how you see and understand things.

Do you have any ideas or suggestions to improve the negative impact of pollution?

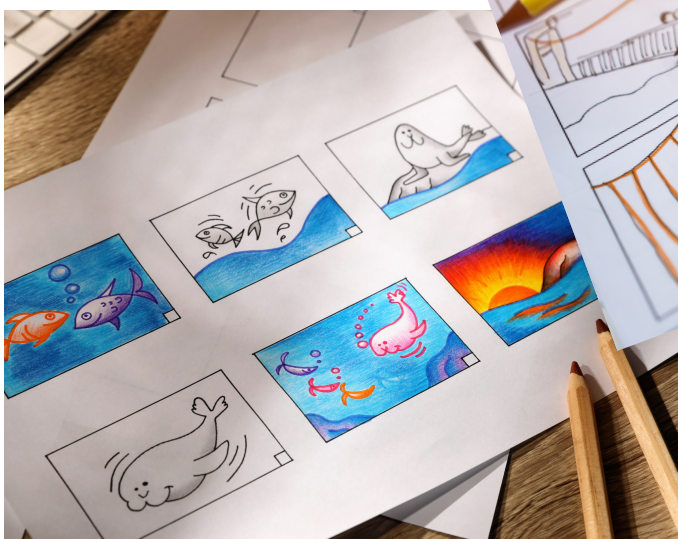
Cut and glue images from old magazines if you wish!

Here are a couple of examples:



Yes, this is serious business,  
but you can always...

**Make it fun!!**



**Enjoy the process!**



3

Write a small scene!



Do you want to write an awesome (and important) story?  
We'll provide you with three scenarios for you to reference!  
Ready? Here we go!



This is Rosa. She lives in Long Beach, where the quality of air is poor.  
What are the risks she is facing? Why is she covering her mouth?



Now meet Pablo, Rosa's son. He is a good kid. Pablo loves to play basketball outside,  
but lately, his mom is not allowing him to do it. Rosa notices that Pablo is upset, so  
she decides to have a conversation with him.

**What do you think they talk about?**

**Do you feel confused? Don't worry! Read all the options below, and once you  
decide the one you like the most, your instructor will help you.**

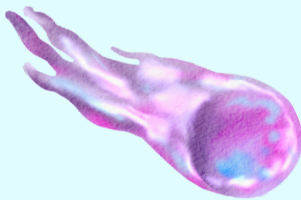
**Have fun!**



You can always write something important in a fun way!



**Name:** Ketara  
**Age:** Unknown  
**Planet:** Ibreon XII



**Name:** Karla  
**Age:** 16  
**Planet:** Earth

Ketara is an Alien. They just landed on our planet. They are from the Vekao Universe, and their planet is Ibreon XII, which has three Moons: Ivion, Hion, and Punus. Keteria is here to study Earth. They want to know why there's so much pollution in your community.

Karla lives in Lynwood, where the quality of air is poor. She was walking back home when Keteria approached her and asked for help. Karla helps her, and they begin to have a conversation.

What do you think happened to Keteria? How did Karla help Keteria? What did they talk about?



Here is another fun example!



Meet José and his son, Pepe. Pepe has been eagerly waiting for the opportunity to work alongside his father. Together, they are currently on a delivery trip from the Port of Long Beach.

What do you think Pepe sees while traveling with his Dad?

What kind of questions does Pepe have for Dad?

What do you think Dad answers?

