**Cars and Air Quality Connections Worksheet (K-2)**

Do gas-powered and electric cars affect our air?

Together, we are going to find out:

* Do cars change how clean the air is?
* Does dirty air affect our health?
* Can certain cars help make the air cleaner?

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| **1. Watch the** [**video**](https://www.youtube.com/watch?v=i6CRcO32-Xs) **of vehicles in traffic. Draw or write about what you saw:** |
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| **Class Reflection:** Do you think cars affect how clean the air is? Share your thoughts as a class. |

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| **2. Let’s find out about one type of air pollution that comes from vehicles.** |
| **Particulate Matter (PM)** |
| **Particulate Matter**, also called **PM**, is a type of air pollution. Let’s learn more about air pollution in this [video](https://www.youtube.com/watch?v=Yjtgu2CxtEk) (watch up to 2:24). |
| **Particulate Matter** is a **pollutant** made up of **very** **tiny particles** and **droplets** that **float** in the air.   * PM comes from **natural** sources like **dirt**, **dust**, and **wildfire smoke**. * PM comes from **human-made** sources like **soot** from **burning fuels** for energy and heat. * PM can make the air **hazy**. |
| Look at two photos that were taken on the same day at different times.  What looks the same? What looks different? Describe what you observe.   1. Write a plus sign “**+**” on the photo that has **more PM.**  * Tell why you think this photo has more PM.  1. Write a minus sign “**−**” on the photo that has **less PM**.  * Tell why you think this photo has less PM.  1. Draw a “**☹**” on the photo that has **dirtier air**.  * Tell why you think this photo has dirtier air.   + - 1. Draw a **“☺”** on the photo that has **cleaner air**. * Tell why you think this photo has cleaner air. |

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| **3. How does air pollution affect our health?** | |
| Draw a line to **match the words and pictures** to explain how **breathing PM affects our health**: | |
| Words:   * Irritates the **eyes, nose, and throat** * Gets into the **lungs** and bloodstream * Triggers **asthma and allergies** | Pictures: |

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| **4. Let’s figure out how gas-powered cars and electric cars work.** |
| Now, let’s put together what we now know about **PM air pollution** and its **health effects** to learn how different types of **vehicles** affect how clean the air is.   * First, watch the [video](https://www.youtube.com/watch?v=qClXTmOtFy8) about how a **gas-powered car** works. * Now, watch the [video](https://www.youtube.com/watch?v=kfhuzje8Zjs) about how an **electric vehicle**, also called an EV, works. |
| How are **electric cars** and **gas-powered cars** the **same**? Draw or write your answer: |
| How are **electric cars** and **gas-powered cars** **different**? Draw or write your answer: |
| **Class Reflection:** Share your thoughts on the following questions as a class:   * Is **clean air** important? * Do **gas-powered** or **electric cars** make our air **dirtier**? * Do **gas-powered** or **electric cars** make our air **cleaner**? |