

Name _____

Eco-Friendly Explorers: Are Autonomous Vehicles Kind to the Environment?

Open-Ended Response Answer Key

1. Answer: Answers may vary, but a possible response could be: Yes, I believe autonomous vehicles have the potential to significantly reduce air pollution in cities. Since they can communicate with each other to avoid traffic congestion and optimize driving patterns, there will be less idling in traffic, which reduces emissions. Additionally, if these vehicles are electric or hybrid, they produce zero tailpipe emissions, contributing to cleaner air in cities.
2. Answer: Answers may vary, but a possible response could be: In a future with autonomous vehicles, I imagine there will be fewer traffic jams, less honking, and smoother traffic flow in my city. This would make commuting faster and more pleasant. Moreover, if most autonomous vehicles are electric, the air would be cleaner, and there would be fewer emissions contributing to air pollution. Overall, the transportation landscape would be more efficient and environmentally friendly.
3. Answer: Renewable energy sources are crucial in making autonomous vehicles more environmentally friendly because they can power the data centers and electric vehicles associated with autonomous technology. Using renewable energy, such as solar or wind power, reduces the carbon footprint of autonomous vehicles. It ensures that the energy required for data processing and charging electric cars comes from sustainable sources, contributing to a greener transportation system.
4. Answer: Government policies can play a significant role in promoting greener autonomous vehicles and reducing the environmental impact of transportation. They can offer incentives for the adoption of electric or hybrid autonomous vehicles, such as tax credits or subsidies. Governments can also invest in renewable energy infrastructure to support the charging needs of electric autonomous cars. Additionally, they can implement regulations to limit emissions from all vehicles, including autonomous ones, to ensure environmental protection. Such policies can create a more sustainable and eco-friendly transportation system.

