

**Rev Your Engines****Overview**

In this Exploration you will select vehicle types and their average weekly driving distances. Then you will observe the emissions test results for those vehicles.

Questions

- List the vehicles in order from lowest-to-highest carbon dioxide (CO₂) emissions at all distances.
- Let's assume that the cars carry two passengers each, the SUV carries four passengers, and the bus carries 24 passengers. Which vehicle would have the highest per-person CO₂ emissions for an average weekly distance of 640 km?
- Based on your observations, how would the CO₂ emissions from a diesel-engine bus compare to those from the diesel-electric hybrid bus?

How to Use This Exploration

- Read the Introduction and click the Continue button.
- Identify the Exploration components.
- Select a vehicle and an average weekly distance. Click the Play button.
- Watch as the vehicle takes the emissions test. Note the test results and read the explanation.
- Record your observations in the Data chart below. (Use the emissions specified in the explanation. If the explanation doesn't include emissions, use the higher number from the vehicle's Annual Emissions range.)
- Repeat for other combinations of vehicle and driving distance.

Data

Vehicle	Annual CO ₂ emissions when driven this average distance per week:		
	160 km (99.4 miles)	400 km (248.5 miles)	640 km (397.7 miles)
Gas-engine car			
Gas-electric hybrid car			
Gas-engine SUV			
Diesel-electric hybrid bus			

Note: 1 kg = 2.2 pounds