ELECTRIC CARS

28.1. Vocabulary

Ex. 1. *Match the words to their definitions.*

1. charging station

a. to vary within certain limits, such as the distance an electric vehicle can travel on a single charge.

2. charging port

b. a location equipped with multiple charging ports or docks for electric vehicles to recharge their batteries.

3. tail pipe emissions

c. a built-in device in an electric vehicle that is used to convert AC power from a charging station into DC power to charge the vehicle's battery.

4. range

d. a device used to charge electronic devices, typically by connecting them to a power source through a cable or docking station.

5. miles per charge

e. a vehicle powered by one or more electric motors, using energy stored in rechargeable batteries.

6. photovoltaic

f. a device that captures sunlight and converts it into electricity, commonly used in photovoltaic systems.

7. onboard charger

g. relating to the production of

	electricity from light, such as solar panels converting sunlight into usable energy.
8. electric car	
	h. an opening on an electronic device where the charging cable can be inserted for recharging the battery.
9. solar panel	
	i. pollutants released from a vehicle's exhaust system, contributing to air pollution and climate change.
10. charging dock	
	j. a machine that converts electrical energy into mechanical energy, used to power electric cars and other devices.
11. electric motor	
	k. a measure of how far an electric vehicle can travel on a single charge of its battery.

Ex. 2. *Complete the sentences with the given words:*

panels, solar, motor, port, charging (2), car, per, pipe, charge, range

The _____(1) dock is where you can plug in your electric car to charge it.

The charging _____(2) on this electric car is located on the front hood.

I always make sure to stop at a _____(3) station when I'm on a long road trip in my electric car.

My dream car is an all-electric _____(4) that helps reduce carbon emissions.

The electric _____(5) provides a smooth and quiet ride compared to traditional internal combustion engines.

This model can reach up to 300 miles _____(6) charge, making it perfect for my daily commute.

The onboard charger makes it easy to _____(7) my electric car at home or on the go.

The photovoltaic _____(8) on the roof of my garage help generate electricity for my electric car.

The _____(9) of electric cars varies depending on different factors such as size and battery life.

With the help of _____(10) panels, I am able to charge my electric car using renewable energy.

An obvious advantage of electric cars is that they produce zero tail _____(11) emissions.

28.2. Reading

Ex. 1. *Read the text.*

Charging an Electric Car

When you buy an electric vehicle, you're also going to need a way to charge it. That's where a charging station comes into play. A charging station is a device that delivers electric energy to the battery of an electric vehicle, such as a car or truck. Also known as an EVSE (electric vehicle supply equipment), a charging station consists of the following components: a plug, a cord, a charging port, and a charging dock.

The plug connects the charging station to the electrical grid. The cord carries the electricity from the plug to the charging port on the electric vehicle. The charging dock holds the plug, cord, and port when they're not in use. In addition, some charging stations have an onboard charger. This is a device that converts the alternating current (AC) from the electrical grid into direct current (DC). The DC is what charges the battery of the electric vehicle.

There are three main types of charging stations: Level 1, Level 2, and Level 3. Level 1 charging stations use a standard household outlet. They typically deliver between two to five miles per hour of charging. Level 2 charging stations require a special outlet and can be installed at home or at a public location. They usually provide between 10 to 60 miles per hour of charging. Level 3 charging stations, also known as fast chargers or DC fast chargers, are usually found at public locations. They can charge an electric vehicle up to 80% in about 30 minutes.

In addition to traditional charging stations, there are other ways to charge an electric vehicle. Some electric vehicles have solar panels on their roofs. These photovoltaic cells convert sunlight into electricity. The electricity is then used to charge the battery of the electric vehicle. However, the range of electric vehicles with solar panels can vary greatly depending on factors such as weather conditions and the amount of sunlight available.

Another way to charge an electric vehicle is by using a charging cable. A charging cable allows you to connect your electric vehicle directly to an electrical outlet. This can be useful if you're in a location where a charging station is not available.

As the popularity of electric vehicles continues to grow, so does the need for more charging stations. Many governments and organizations are investing in the development of charging infrastructure to support the widespread adoption of electric vehicles. In addition, some electric vehicle owners choose to install their own charging stations at home. This allows them to conveniently charge their electric vehicle overnight or whenever it's not in use.

Overall, charging stations play a crucial role in the success of electric vehicles. They provide a convenient and efficient way to charge the battery of an electric vehicle, making it easier for people to transition from traditional gasoline-powered vehicles to electric vehicles.

Ex. 2. *Answer the questions.*

1. What is the purpose of a charging station for electric vehicles?

2. What are the components of a charging station?

3. How does an onboard charger function in a charging station?

4. What are the three main types of charging stations and how do they differ in terms of charging speed?

5. Besides traditional charging stations, what are some other ways to charge an electric vehicle?

6. What factors can affect the range of electric vehicles with solar panels?

7. Why are governments and organizations investing in the development of charging infrastructure?