

L309

Observation of City Meteorology

都市気候観測ステーション

■ Purpose of Exhibition

There are distinctive climates in urban areas. This is because grounds have been covered with concrete and asphalt with the advancement of urbanization, and rain water is discharged straight into the ocean without being absorbed into the ground due to the development of a sewage system.

On the rooftop of the Science Museum there is meteorological equipment, which is the same type as AMEDAS, known for weather forecasting. In this exhibit, meteorological data gathered on the rooftop of the Science Museum can be observed on the spot while explaining the climate unique to the city of Nagoya.



■ Additional Knowledge



rising air and leads to the regional heavy rain. An air conditioner can be used to make a room temperature cooler when it is hot. But it produces more heat and worsens the heat island effect. We fall in a vicious circle.

[Preventing Heat Island Effect]

In order to reclaim ground and greenery, green walls and green roofs and planting plants on roofs and walls has been promoted. A plant requires water and soil to grow. By greening roofs and walls and not letting rain water run out of a city immediately, it can hold on to rain water just for a little while longer. You can also see green roofs and green walls in the Nagoya City Science Museum. Go check them out!

[Heat Island]

Although there are various kinds of differences between urban areas and rural areas, we often hear of the heat island effect in climate. It means "island of heat". It was named due to that fact that the temperature of a city in which the heat island effect occurs is higher than that of areas around the city, and appears isolated, like an island.

[Water Lowers Temperature]

Water takes heats away when it evaporates. When the sunlight hits wet ground, some part of the energy produced in the process is used to evaporate water. In other words, the temperature on wet ground hardly rises. For this reason, watering the street is a common thing done in summer.

[Causes for Heat Island Effect]

In urban areas, buildings stand, many roads are paved, and rain water is carried away instantly and runs into a sewer. In short, there is less ground for absorbing rain water. This is one of the serious causes for the heat island effect. Seen often in urban areas, many concrete buildings, which accumulate heat, and things that produce heat other than a solar light, such as cars and ACs, also cause the heat island effect.

[Damage of Heat Island Effect]

In high temperatures, there are dangers such as heatstroke. High temperatures near the ground cause

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