The Moon

Illustration: László Herbszt

The Moon’s surface is composed of two distinct types of terrain: the mare (seas) and the highlands. The mare are vast plains formed from ancient lava flows, while the highlands are rugged and mountainous areas. The most ancient formations of the lunar surface are the >4-billion-year-old highlands, and the areas where volcanic activity has occurred are the mare. The mare are dark, smooth, and were once thought to be the result of ancient water bodies. However, there is no visible sign of water: even the meandering channels of the Moon were formed by volcanic activity. The youngest formations are the light-colored soils that cover the mare, created by the impact of asteroids and space debris. The surface is so densely covered with craters that a newly created one surely wipes away a few earlier craters.

The Moon has been shaped by the impact of asteroids and meteors. The most dramatic events were the formation of the large basins and the smallest craters. These craters were created by the impact of space debris and may have been formed by ancient volcanic activity. The Moon is the most densely cratered body in the solar system, and the number of craters increases with age. The Moon has been changing for billions of years. It is thought to have been in its current form for at least 3.5 billion years. The Moon’s surface is constantly changing due to the impact of space debris and the activity of the Moon’s interior. There is no noticeable age difference between the ancient craters and the younger ones.

The Moon has been studied extensively by spacecraft and astronauts. The most recent and significant mission was the Apollo missions, which landed on the Moon’s surface in the 1960s and 1970s. The Moon has also been studied by radar and other remote sensing techniques. The Moon has been a source of inspiration for explorers and scientists for centuries, and it continues to be a source of fascination for people around the world.