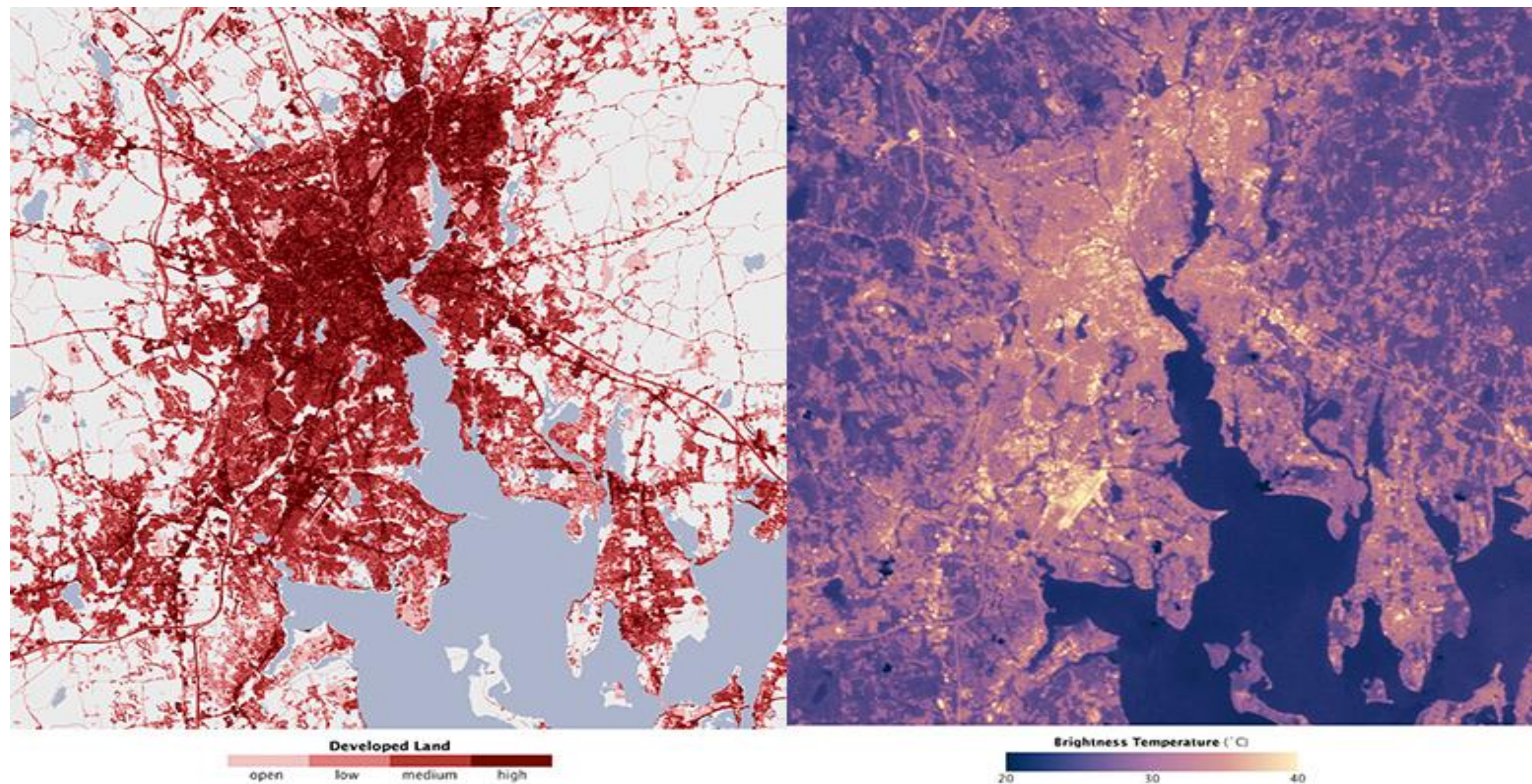


How does the urban heat island get hot?

One of the greatest contributors to the heat island is the Albedo effect which is the ability of a surface to reflect or absorb the sun's solar radiation. Lighter materials tend to reflect more of the sun's rays and darker shades absorb more sunlight and heat. Plants absorb sunlight and use its energy for food.

Why does this matter to the Urban Heat Island?

Within our urban areas, the materials we use for roads and buildings are generally dark which increase our ability to absorb solar energy. When cities grow we make space for city structures by reducing greenspace and in this process, we lose areas that naturally absorb and transform solar energy from photosynthesis.



Experiment Time!

To illustrate the various building materials that absorb heat, we have different shades of rocks under a heat lamp to show how much the color of a material contributes to the urban heat island. When checking the temperature of these materials, What materials did you think had the greatest impacts on temperature? What is the difference in range from the lightest rocks to the darkest rocks? Was the difference as much as you expected?