Leaves get sunlight most efficiently, and effectively, using their curved shape. A solar panel absorbs sunlight most efficiently when it is perpendicular to the sun. Leaves are naturally curved to absorb the sunlight without moving with the sun. Leaves grow on different branches to cover all possible angles of sunlight throughout the day.



The general shape of the leaves in our picture is a hyperbolic paraboloid. One hyperbolic paraboloid formula is  $z=Ax^2+By^2$ . The downward curving surface helps to absorb sunlight. The upward curving surface helps to channel water.