Abstract. We discuss partitions of the sphere and other ellipsoids into equal areas and isoperimetric problems on surfaces with density. We prove that the least-perimeter partition of any ellipsoid into two equal areas is by division along the shortest equator. We extend the work of C. Quinn, 2007, and give a new sufficient condition for a perimeter-minimizing partition of $\mathbf{S}^2$ into four regions of equal area to be the tetrahedral arrangement of geodesic triangles. We solve the isoperimetric problem on the plane with density $|y|^\alpha$ for $\alpha > 0$ and solve the double bubble problem when α is a positive integer. We also identify isoperimetric regions on cylinders with densities e^z and $|\theta|^\alpha$. Next, we investigate stable curves on surfaces of revolution with radially symmetric densities. Finally, we give an asymptotic estimate for the minimal perimeter of a partition of any smooth, compact surface with density into n regions of equal area, generalizing the previous work of Maurmann *et al.* (to appear).