ABSTRACT. One considers the class of maps $u : D \to S^2$, which map ∂D to one point in S^2. If u were also harmonic, then it is known that u must be constant. However, if u is instead f-harmonic — a critical point of the energy functional

$$\frac{1}{2}\int_D f(x)|\nabla u(x)|^2$$

— then this need not be true. We shall see that there exist functions $f : D \to (0, \infty)$ and nonconstant f-harmonic maps $u : D \to S^2$ which map the boundary to one point. We will also see that there exist nonconstant f for which, there is no nonconstant f-harmonic map in this class. Finally, we see that there exists a nonconstant f-harmonic map from the torus to the 2-sphere.