1145-F1-645 **Andrew Simoson*** (ajsimoso@king.edu), King University, 1350 King College Road, Bristol, TN 37620. *Golden-Mean Sunflower Inequalities.*

It is well-known that the seeds in an ideal sunflower are arranged as a family consisting of the Fibonacci number f_n of spirals for each integer $n \geq 2$, where $f_0 = 0$, $f_1 = 1$, and $f_n = f_{n-1} + f_{n-2}$. Let ϕ be the golden mean, $\phi = \frac{1+\sqrt{5}}{2}$, and let $F_n = \frac{f_{n+1}}{f_n}$ for all $n \geq 1$. When n is even, $|F_n - \phi| < \frac{1}{\sqrt{5}f_n^2}$; and when n is odd, $\frac{1}{\sqrt{5}f_n^2} < |F_n - \phi| < \frac{1}{2f_n^2}$. These inequalities enable us to find the number of seeds lying along one rotation for any of the f_n spirals. As a partial spoiler alert: when n is even the number of seeds is $f_{n-1} + f_{n+1}$. (Received September 12, 2018)