1077-VI-43   **Jay Lawrence Schiffman*** (`schiffman@rowan.edu`), 201 Mullica Hill Road, Glassboro, NJ 08028-1701. *Exploring Graph Theory Utilizing The OEIS, Wolfram Alpha, and Mathworld.* Preliminary report.

The On-Line Encyclopedia of Integer Sequences and the websites Mathworld and Wolfram Alpha will be utilized together with MATHEMATICA 8.0 as we journey through a subset of the catalogue of graphs (depicted by isomorphism classes)of small order that are featured in the index of Frank Harary's classic textbook Graph Theory. Among the integer sequences discussed are the number of distinct isomorphism classes for undirected graphs of small order as well as those which are connected together with the number of simple trees on a small number of vertices. Snap shots taken from Mathematica, MathWorld, and Wolfram Alpha will be illustrated to present a detailed analysis of the graphs and trees discussed. Our enhanced technology enables one to explore a world of possibilities and can serve as motivation and enrichment for students and faculty partaking of courses in discrete mathematics and graph theory. (Received July 01, 2011)