1017-20-170   **Francesco Matucci*** (`matucci@math.cornell.edu`), 310 Malott Hall, Cornell University, Ithaca, NY 14853, and **James M. Belk**, Texas A&M University. *On Trivalent Directed Graphs and Conjugacy Classes of Thompson's Group F.* Preliminary report.

We study the conjugacy classes of Thompson's group F by associating a unique directed trivalent graph to each of them. We give a necessary and sufficient condition for a trivalent directed graph G to arise from a conjugacy class of an element of F. The proof relies on the planarity of our graphs. An application of this description is a proof of the solvability of the conjugacy problem for F similar to the original one by Guba and Sapir. (Received February 20, 2006)