1056-30-1352   **Michael A. Brilleslyper*** (`mike.brilleslyper@usafa.edu`), Department of Mathematical Sciences, USAF Academy, CO 80840. *Modeling Fluid Flow in the Complex Plane.*

We present a quick tour of several undergraduate-level topics related to modeling ideal fluid flow in regions of the complex plane. We introduce the *FlowTool* applet that allows students to easily explore how the stream lines of the flow are affected by various combinations of sources and sinks. We also use Mathematica to investigate a range of extensions of this standard material to include sources and sinks in the interior of the flow, as well as interval sources. This material forms the content of one chapter of a new proposed text on explorations in complex analysis for undergraduates. (Received September 21, 2009)