Let $\triangle ABC$ denote any triangle. Then the triangles whose vertices are given by the points of intersection of the nearside trisectors of $\angle A$, $\angle B$, and $\angle C$ and the points of intersection of the nearside trisectors of the exterior angles at $A$, $B$, and $C$ are two equilateral triangles. These triangles are sometimes referred as Morley $i\triangle$ and Morley $e\triangle$ since their vertices lie in the interior and exterior of the mother triangle $\triangle ABC$, respectively. In this paper, we discuss how the Morley $i\triangle$ and Morley $e\triangle$ can be used to characterize the mother triangle. (Received September 22, 2010)