Many studies have explored mathematics textbooks as a crucial medium in teaching and learning to understand students’ learning opportunities and achievement gap across countries. However, little attention has been given to the roles of non-textual elements (e.g., pictures, illustrations, graphs, and mathematical figures) in mathematics textbooks: what do non-textual elements offer for teaching and learning mathematics, what aspects of non-textual elements are helpful for, or detrimental to, student learning, and how do they differ across different educational systems? As a comparative investigation, this study analyzed qualitative interview data from 21 secondary mathematics teachers and 7 curriculum developers in South Korea and the United States in order to find commonalities and differences in important aspects of non-textual elements in mathematics textbooks. The results provide useful information about what aspects of non-textual elements teachers and curriculum developers considered important for student learning as well as practical implications on how to improve non-textual elements in mathematics textbooks. (Received September 22, 2009)