The purpose of this study was to develop an attention test for elementary school children, one with a solid theoretical basis and a clear connection to an attention training program. Teachers and medical workers could use this assessment tool to objectively weed out children with an attention deficit problem, and also could adopt an appropriate training program according to the assessment results. The researchers adopted a "Clinical Model of Attention" as the theoretical basis for this self-made assessment tool. According to the model, this tool was constructed from five attention factors, including focused attention, sustained attention, selective attention, alternating attention, and divided attention. Those administering the test could select an appropriate training program for students suffering from the degree of attention deficit indicated by the assessment results. According to the research results, all indices of this 10-subtest model showed a good fit and good reliability and validity. It was also found that the Mandarin and math performance of elementary students were affected by both the function of sustained and alternating attention; furthermore, math performance was also affected by the function of divided attention.