Technology in schools has become quite commonplace. It is essential that principals possess knowledge and proficiency in technology skills and technology integration in order to be effective instructional leaders. As critical issues transform from access to effectively integrating technology into curriculum, this study aimed to determine the extent to which technology leadership behaviors identified in the NETS-A (2002) standards from ISTE are being implemented by elementary principals. Of the 35 survey questions posed to principals, 28 were perceived as strengths. Only seven questions were perceived as a weakness. The six NETS-A strands in order of relative strength were: Productivity and Professional Practice; Learning and Teaching; Support, Management, and Operations; Social, Legal, and Ethical Issues; Leadership and Vision; and Assessment and Evaluation. This study explored the hierarchy of skills needed for effective technology leadership and informed professional development needs in regards to technology skills and technology integration of principals. A conceptual framework delineating the components of effective technology leadership in elementary schools is presented.