The present study was designed to check teachers' awareness about brain-based learning at elementary level. The major objectives of the study were: to assess elementary teachers' awareness about providing balance between intrigue and stress in the classroom to maximize learning, to explore elementary teachers' awareness about the influence of social conditions on students' learning, to determine teachers' awareness about the role of physical activity and Arts on learning, to assess elementary teachers' knowledge about balance between novelty and predictability in class routines, to evaluate teachers' perception about the relation between frequent/ formative assessment and achievement, to assess elementary teachers' awareness about the importance of applying learning in practical life, to appraise teachers' awareness about the importance of integrating content in teaching, and to determine elementary teachers' awareness about principles of brain-based learning (BBL) and individual differences among students. To achieve the above objectives of the study, 8 major hypotheses were formulated and tested at 0.05 level of significance. Teachers from public and private elementary schools located in Islamabad/ Rawalpindi and the surrounding rural areas made up the population. The sample of the study consisted of 321 elementary teachers. A questionnaire was developed to check elementary teachers' awareness about brain-based learning (TABBL) in English and was translated into Urdu. Questionnaire was pilot tested on 50 teachers to check its reliability. Some adjustments were made in the Urdu translation in the light of pilot testing results. The collected data were analyzed by applying mean scores, standard deviation, t-test, ANOVA and Post hoc test through Statistical Package for Social Sciences (SPSS). Major findings infer that there is lack of awareness among elementary school teachers about the major principles of BBL. However, teachers in urban area schools incorporate social skills in their lessons more than their counterparts in the rural areas. Teachers with higher academic qualifications tend to incorporate social skills and values in their lesson points to the fact that university education helps open the minds of teachers. It is suggested to support elementary school teachers through in-service teacher training on regular basis about the importance of brain-based learning.