The focus of this study is on attention in the context of learning. Mainly, the investigation was done on the relationship between attention and performance among students using Physics Playground (PP), an educational game designed to help secondary students understand Newtonian Physics [14]. The game aims to help students understand the concepts such as balance, mass, conservation and transfer of momentum, gravity and potential kinetic energy [13]. PP has 0-3 levels and the goal in each level is to bring the green ball to the brown ball by drawing using virtual colored sticks. However, by increasing the ramps, lenses, springsboards, and paddle buoys, players are awarded to the players depending upon the number of triangles they have drawn in attempt to solve the problem. A gold badge is given when players solve the level using fewer or at par with the object count limit set per level. Silver badge is awarded if a player solves a problem but exceeds the threshold. Actor of players are recorded on the background and saved in a log file [15]. Different studies on PP yielded different results. While in the US, PP has helped students to have an increased understanding on qualitative Physics [15] in the Philippines however, PP did not result to learning gains [21]. Researchers of this study have thus far focused on examining the attention of the hands that among Philippines students who played PP analyzing their eye movement and eye-tracking. Eye-tracking is the method that has been used by researchers to quantify attention relations in the current research. It has been observed when a given stimulus is received by the eyes. This method is generally divided into two major categories, namely fixations and saccades. Although, saccades are sudden changes of eye gazes between the occurrence of fixation points, no touchings of information happens during this phenomenon [21]. Fixation, on the other hand, is sustained eye gaze at a certain position which indicates a person’s attention on that particular stimulus [15], which is the current task a person is working on [15], and that it is a proper indicator of attention[21]. Because of this, fixation metrics have been used in conducting the analysis in this study. The questions that the researchers aimed to answer in this study are the following: (1) To what extent can quantify attention of students playing PP by using eye gaze data? and (2) Is there a relationship between student/eye movement and performance? The device has a sampling rate of 120 Hz and an error rate of less than 0.3 degrees. The four visual metric fixation variables provided by the system have been used for data analysis are the following: 1. Total Contact Time (TCT) - total time in milliseconds a participant fixates a stimulus. 2. Number of Fixation (NOF) - the count of fixations on an eye movement or eye gaze data. 3. Latency of First Fixation (LFF) - latency of the first fixation on an eye movement or eye gaze data. 4. Duration of First Fixation (DF) - duration of the first fixation on an eye movement or eye gaze data. Conclusion Results show that students who had good performance spent less time looking at the stimulus when they were solving with PP, whereas the lower performers spent more time. The results are indicative that students who earned bad grades had thought of solution much more faster and earlier than those who did not solve the problem, which is in line with the research findings of [20] who noted that sustained attention to better learning and better performance. Instead, students who spent more time in the stimulus space that might have helped them to think of a solution more quickly, hence they did not need to gaze at the material for a prolonged or sustained period of time. The researchers suspect that the difference in finding is due to the material they were used to designed. This difference might have been a deciding point for further examination. Furthermore, it is the goal of the researchers to investigate the future work whether or not a common trend in attention levels of students can be found in other stimulus in PP.