Research has been conducted on the effect of Problem Based Learning (PBL) models on improving student learning outcomes in a characteristic of light. This study aims to get an overview of the improvement of learning outcomes of students on the material nature of light as the effect of applying the Problem Based Learning (PBL) model when compared to students who get learning with conventional models. The research method is quasi-experimental with one group pretest and posttest research designs. The subjects of this study were all fourth grade students at SDN Sindangpanon, Banjaran Kab. Bandung in the 2018-2019 academic year which consists of one experimental class and one control class totaling 40 students. The instruments used in this study were multiple choice type tests, student worksheets (SW), and questionnaires for the success of learning outcomes for students. Based on the analysis of the research data, it was obtained: (1) the percentage of the average N-gain score for the learning outcome test for the experimental class was 34.64% (medium category), and the N-gain mean score for the learning outcome test for the control class was 16.73% (low category), (2) the percentage of questionnaire scores is 100%, and the percentage of the results scores of the student worksheets is 80%. It can be concluded that the application of the Problem Based Learning (PBL) model can further improve elementary school learning outcomes in light properties compared to the application of learning with ordinary (conventional) models.

**Key words:** Problem Based Learning (PBL), Improved learning outcomes, and the characteristic of light.