Learning media can distribute information form of stimulus in the form of thoughts, feelings, concerns, and interests of students, and could eventually make the learning activities of students. Expository method is a method of teaching used in conventional learning. One difficulty in learning methods are students in MTs Muhammadiyah Cilacap still lacking interaction with the teacher, passive learning occurs in learning. Therefore, by providing assistance to help students and teachers in MTs Muhammadiyah Cilacap interact is by learning how to use the learning media based Augmented Reality (AR). The purpose of this study is to help teachers and students learn the material facilitates the skin with exciting and memorable use of skin physiology anatomy learning system based Agmented Reality (AR). This research uses descriptive research method that CLC (Classical Life Cycle) or the waterfall model and engineering research using data collection techniques. Application development process is done in stages includes the step of collecting data, analyze, system design, programming, testing, and maintenance. In the data collection techniques are conducting literature study and observation with interviews. Making aplikasi Augmented Reality (AR) is made with the help vuforia SDK to create a marker and unity for the engine or system making its application. The results of the development of this application can display a 3D object with a sound skin, and information about the material being taught in MTs Muhammadiyah Cilacap in accordance with the curriculum. Based on the results of user testing using a pretest, posttest and a questionnaire that the application is able to make that student scores increased an average yield of 86 at the time of post-test and 92.75% in the percentage of questionnaires with very good category.

Keywords: Learning conventional, passive learning, Waterfall, Augmented Reality