Abstract: This research aims to enhance Scientific Writing Skill (SWS) of students on biology through the application of guided inquiry learning with reading assignment. This research was a three cycles Classroom Action Research (CAR). Each cycle consisted of four phases, i.e. planning, acting, observing, and reflecting. The subjects of this research are 30 students of Grade X MIA 7 of SMA N 4 Surakarta, consists of 11 male and 19 female students. The assessment were analyzed using scientific writing skill’s rubric adapted from Toppen (2014), which will measure the ability to develop writing creatively, use spelling and grammar correctly, communicate knowledge which consuct, and connect science and technology with whole world. This research target is the average percentage increase to 65 %. The result of this research is guided inquiry learning had effectively increased student’s SWS. The average percentage increased from 38,13 % in pre-cycle to 77,29 % in third cycle.

Keywords: Guided Inquiry Learning, Reading Assignment, Scientific Writing Skill