In biochemistry, three-dimensional models are being used to help students comprehend advanced topics within the subject. Because a greater cognitive load is often related to three-dimensional models, learning what raises the cognitive load is critical. From there, measures can be taken to help lower the cognitive load and make the material easier for students to understand. To understand cognitive load in relation to models, students were presented with three-dimensional serine protease models and their substrates and asked to match the clear surface plate to the backbone, and then the substrate to the surface plate. On the substrates, students were asked to place stickers on the locations of each peptide bond and catalytic triad. Students subsequently completed a worksheet related to the task. Tobii Glasses 2 were used to track eye movement while students completed the task. Using Tobii Pro software, heat maps and Areas of Interest (AOIs) were created to indicate what areas of the three-dimensional models showed the highest points of fixation. The results discussed will include how students assessed the models, ways to improve the activity such as providing more straightforward directions, and a comparison of the AOI fixation duration of the clear surface plate activity and the color surface plate activity done the previous year.