

Implementing Common Core Standards

According to the new Common Core Standards students enrolled in high school Geometry course are expected to begin to formalize their geometry experiences from elementary and middle school, using more precise definitions and developing careful proofs. The concepts of congruence, similarity, and symmetry can be understood from the perspective of geometric transformation. Fundamental are the rigid motions: translations, rotations, reflections, and combinations of these, all of which are here assumed to preserve distance and angles (and therefore shapes generally). Reflections and rotations each explain a particular type of symmetry, and the symmetries of an object offer insight into its attributes—as when the reflective symmetry of an isosceles triangle assures that its base angles are congruent. One domain of CCS is Congruence (G-CO) and two of its standards are to represent transformations in the plane using (G-CO. A2) and, given a geometric figure and a rotation, reflection, or translation, to draw the transformed figure (G-CO. A5)

In order to implement these standards, I decided to write this curriculum unit that concentrates around Transformations (translations, reflections, rotations and dilations) and how they can be applied in real life problems. Focusing on what my students are interested in and then brought math into their world I will engage my students using soccer through activities that develop critical thinking skills.