

Abstract

These lesson plans are presented when studying a science unit on space focusing on incorporating mathematics in the science curriculum. The grade levels targeted are 6th - 8th. Students compare sizes of planets and their relationship to one another using large numbers and hands-on manipulatives. Instructional strategies are designed to help students be confident in their ability to apply math to other areas of the curriculum. This lesson allows students to experience rounding and comparison while building on their knowledge of place value and applying that knowledge to numbers of various quantities. Students are also able to visually compare the size of the planets and their ratio to spheres (balls) of different sizes. It was apparent that although students may be able to round numbers as the numbers increase in value, students often find it difficult to apply the concept of rounding to a variety of values. Students had difficulty applying critical thinking skills to the relationship of planets to spheres when using designated numbers. Incorporating cross-curricular lessons significantly enhances student understanding and generalization of subject matter.